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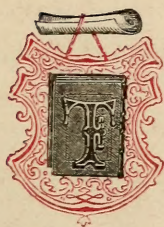
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TICKNOR AND FIELDS, Publishers.

SOUNDINGS
FROM THE ATLANTIC.

BY

OLIVER WENDELL HOLMES.



BOSTON:
TICKNOR AND FIELDS.
1864.

Entered according to Act of Congress, in the year 1863, by
OLIVER WENDELL HOLMES,
in the Clerk's Office of the District Court of the District of Massachusetts.

UNIVERSITY PRESS:
WELCH, BIGELOW, AND COMPANY,
CAMBRIDGE.

TO

JACOB BIGELOW, M. D.,

WHOSE VARIED ATTAINMENTS IN LITERATURE, SCIENCE, AND ART
REFLECT THEIR MINGLED LIGHT ON THE PROFESSION
WHICH HE ADORNS,

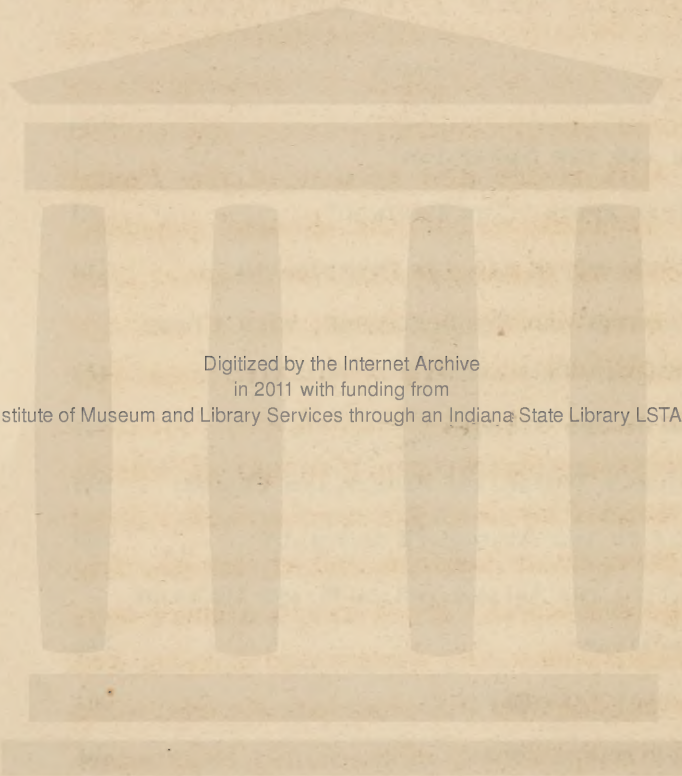
THIS VOLUME OF ESSAYS

IS

Respectfully Dedicated.

CONTENTS.

	PAGE
BREAD AND THE NEWSPAPER	1
MY HUNT AFTER "THE CAPTAIN"	24
THE STEREOSCOPE AND THE STEREOGRAPH	124
SUN-PAINTING AND SUN-SCULPTURE; WITH A STEREO- SCOPIC TRIP ACROSS THE ATLANTIC	166
DOINGS OF THE SUNBEAM	228
THE HUMAN WHEEL, ITS SPOKES AND FELLOES	282
A VISIT TO THE AUTOCRAT'S LANDLADY	328
A VISIT TO THE ASYLUM FOR AGED AND DECAYED PUNSTERS	348
THE GREAT INSTRUMENT	362
THE INEVITABLE TRIAL	401



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BREAD AND THE NEWSPAPER.

THIS is the new version of the *Panem et Circenses* of the Roman populace. It is our *ultimatum*, as that was theirs. They must have something to eat, and the circus-shows to look at. We must have something to eat, and the papers to read.

Everything else we can give up. If we are rich, we can lay down our carriages, stay away from Newport or Saratoga, and adjourn the trip to Europe *sine die*. If we live in a small way, there are at least new dresses and bonnets and every-day luxuries which we can dispense with. If the young Zouave of the family looks smart in his new uniform, its respectable head is content, though he himself grow seedy as a caraway-umbel late in the season. He will cheerfully calm the perturbed nap of his old beaver

by patient brushing in place of buying a new one, if only the Lieutenant's jaunty cap is what it should be. We all take a pride in sharing the epidemic economy of the time. Only *bread and the newspaper* we must have, whatever else we do without.

How this war is simplifying our mode of being! We live on our emotions, as the sick man is said in the common speech to be nourished by his fever. Our ordinary mental food has become distasteful, and what would have been intellectual luxuries at other times, are now absolutely repulsive.

All this change in our manner of existence implies that we have experienced some very profound impression, which will sooner or later betray itself in permanent effects on the minds and bodies of many among us. We cannot forget Corvisart's observation of the frequency with which diseases of the heart were noticed as the consequence of the terrible emotions produced by the scenes of the great French Revolution. Laennec tells the story of a convent, of which he was the medical director, where all

the nuns were subjected to the severest penances and schooled in the most painful doctrines. They all became consumptive soon after their entrance, so that, in the course of his ten years' attendance, all the inmates died out two or three times, and were replaced by new ones. He does not hesitate to attribute the disease from which they suffered to those depressing moral influences to which they were subjected.

So far we have noticed little more than disturbances of the nervous system as a consequence of the war excitement in non-combatants. Take the first trifling example which comes to our recollection. A sad disaster to the Federal army was told the other day in the presence of two gentlemen and a lady. Both the gentlemen complained of a sudden feeling at the *epigastrium*, or, less learnedly, the pit of the stomach, changed color, and confessed to a slight tremor about the knees. The lady had a "*grande révolution*," as French patients say, — went home, and kept her bed for the rest of the day. Perhaps the reader may smile at the mention of such trivial indispositions, but in

more sensitive natures death itself follows in some cases from no more serious cause. An old gentleman fell senseless in fatal apoplexy, on hearing of Napoleon's return from Elba. One of our early friends, who recently died of the same complaint, was thought to have had his attack mainly in consequence of the excitements of the time.

We all know what the *war fever* is in our young men, — what a devouring passion it becomes in those whom it assails. Patriotism is the fire of it, no doubt, but this is fed with fuel of all sorts. The love of adventure, the contagion of example, the fear of losing the chance of participating in the great events of the time, the desire of personal distinction, all help to produce those singular transformations which we often witness, turning the most peaceful of our youth into the most ardent of our soldiers. But something of the same fever in a different form reaches a good many non-combatants, who have no thought of losing a drop of precious blood belonging to themselves or their families. Some of the symptoms we shall mention are

almost universal ; they are as plain in the people we meet everywhere as the marks of an influenza, when that is prevailing.

The first is a nervous restlessness of a very peculiar character. Men cannot think, or write, or attend to their ordinary business. They stroll up and down the streets, or saunter out upon the public places. We confessed to an illustrious author that we laid down the volume of his work which we were reading when the war broke out. It was as interesting as a romance, but the romance of the past grew pale before the red light of the terrible present. Meeting the same author not long afterwards, he confessed that he had laid down his pen at the same time that we had closed his book. He could not write about the sixteenth century any more than we could read about it, while the nineteenth was in the very agony and bloody sweat of its great sacrifice.

Another most eminent scholar told us in all simplicity that he had fallen into such a state that he would read the same telegraphic despatches over and over again in different papers,

as if they were new, until he felt as if he were an idiot. Who did not do just the same thing, and does not often do it still, now that the first flush of the fever is over? Another person always goes through the side streets on his way for the noon *extra*, — he is so afraid somebody will meet him and *tell* the news he wishes to *read*, first on the bulletin-board, and then in the great capitals and leaded type of the newspaper.

When any startling piece of war-news comes, it keeps repeating itself in our minds in spite of all we can do. The same trains of thought go tramping round in circle through the brain, like the supernumeraries that make up the grand army of a stage-show. Now, if a thought goes round through the brain a thousand times in a day, it will have worn as deep a track as one which has passed through it once a week for twenty years. This accounts for the ages we seem to have lived since the twelfth of April last, and, to state it more generally, for that *ex post facto* operation of a great calamity, or any very powerful impression, which we once illustrated by the image of a stain spreading back-

wards from the leaf of life open before us through all those which we have already turned.

Blessed are those who can sleep quietly in times like these ! Yet, not wholly blessed, either ; for what is more painful than the awaking from peaceful unconsciousness to a sense that there is something wrong, — we cannot at first think what, — and then groping our way about through the twilight of our thoughts until we come full upon the misery, which, like some evil bird, seemed to have flown away, but which sits waiting for us on its perch by our pillow in the gray of the morning ?

The converse of this is perhaps still more painful. Many have the feeling in their waking hours that the trouble they are aching with is, after all, only a dream, — if they will rub their eyes briskly enough and shake themselves, they will awake out of it, and find all their supposed grief is unreal. This attempt to cajole ourselves out of an ugly fact always reminds us of those unhappy flies who have been indulging in the dangerous sweets of the paper prepared for their especial use.

Watch one of them. He does not feel quite well, — at least, he suspects himself of indisposition. Nothing serious, — let us just rub our fore-feet together, as the enormous creature who provides for us rubs his hands, and all will be right. He rubs them with that peculiar twisting movement of his, and pauses for the effect. No ! all is not quite right yet. Ah ! it is our head that is not set on just as it ought to be. Let us settle *that* where it should be, and *then* we shall certainly be in good trim again. So he pulls his head about as an old lady adjusts her cap, and passes his fore-paw over it like a kitten washing herself. — Poor fellow ! It is not a fancy, but a fact, that he has to deal with. If he could read the letters at the head of the sheet, he would see they were *Fly-Paper*. — So with us, when, in our waking misery, we try to think we dream ! Perhaps very young persons may not understand this ; as we grow older, our waking and dreaming life run more and more into each other.

Another symptom of our excited condition is seen in the breaking up of old habits. The

newspaper is as imperious as a Russian Ukase ; it will be had, and it will be read. To this all else must give place. If we must go out at unusual hours to get it, we shall go, in spite of after-dinner nap or evening somnolence. If it finds us in company, it will not stand on ceremony, but cuts short the compliment and the story by the divine right of its telegraphic despatches.

War is a very old story, but it is a new one to this generation of Americans. Our own nearest relation in the ascending line remembers the Revolution well. How should she forget it ? Did she not lose her doll, which was left behind, when she was carried out of Boston, then growing uncomfortable by reason of cannon-balls dropping in from the neighboring heights at all hours, — in token of which see the tower of Brattle-Street Church at this very day ? War in her memory means '76. As for the brush of 1812, "we did not think much about that" ; and everybody knows that the Mexican business did not concern us much, except in its political

relations. No! War is a new thing to all of us who are not in the last quarter of their century. We are learning many strange matters from our fresh experience. And besides, there are new conditions of existence which make war as it is with us very different from war as it has been.

The first and obvious difference consists in the fact that the whole nation is now penetrated by the ramifications of a network of iron nerves which flash sensation and volition backward and forward to and from towns and provinces as if they were organs and limbs of a single living body. The second is the vast system of iron muscles which, as it were, move the limbs of the mighty organism one upon another. What was the railroad-force which put the Sixth Regiment in Baltimore on the 19th of April but a contraction and extension of the arm of Massachusetts with a clenched fist full of bayonets at the end of it?

This perpetual intercommunication, joined to the power of instantaneous action, keeps us always alive with excitement. It is not a breath-

less courier who comes back with the report from an army we have lost sight of for a month, nor a single bulletin which tells us all we are to know for a week of some great engagement, but almost hourly paragraphs, laden with truth or falsehood as the case may be, making us restless always for the last fact or rumor they are telling. And so of the movements of our armies. To-night the stout lumbermen of Maine are encamped under their own fragrant pines. In a score or two of hours they are among the tobacco-fields and the slave-pens of Virginia. The war passion burned like scattered coals of fire in the households of Revolutionary times; now it rushes all through the land like a flame over the prairie. And this instant diffusion of every fact and feeling produces another singular effect in the equalizing and steadying of public opinion. We may not be able to see a month ahead of us; but as to what has passed, a week afterwards it is as thoroughly talked out and judged as it would have been in a whole season before our national nervous system was organized.

“ As the wild tempest wakes the slumbering sea,
Thou only teachest all that man can be! ”

We indulged in the above apostrophe to War in a Phi Beta Kappa poem of long ago, which we liked better before we read Mr. Cutler's beautiful prolonged lyric delivered at the recent anniversary of that Society.

Oftentimes, in paroxysms of peace and goodwill towards all mankind, we have felt twinges of conscience about the passage, — especially when one of our orators showed us that a ship of war costs as much to build and keep as a college, and that every port-hole we could stop would give us a new professor. Now we begin to think that there was some meaning in our poor couplet. War *has* taught us, as nothing else could, what we can be and are. It has exalted our manhood and our womanhood, and driven us all back upon our substantial human qualities, for a long time more or less kept out of sight by the spirit of commerce, the love of art, science, or literature, or other qualities not belonging to all of us as men and women.

It is at this very moment doing more to melt

away the petty social distinctions which keep generous souls apart from each other, than the preaching of the Beloved Disciple himself would do. We are finding out that not only "patriotism is eloquence," but that heroism is gentility. All ranks are wonderfully equalized under the fire of a masked battery. The plain artisan or the rough fireman, who faces the lead and iron like a man, is the truest representative we can show of the heroes of Crecy and Agincourt. And if one of our fine gentlemen puts off his straw-colored kids and stands by the other, shoulder to shoulder, or leads him on to the attack, he is as honorable in our eyes and in theirs as if he were ill-dressed and his hands were soiled with labor.

Even our poor "Brahmins," — whom a critic in ground-glass spectacles (the same who grasps his statistics by the blade and strikes at his supposed antagonist with the handle) oddly confounds with the "bloated aristocracy," whereas they are very commonly pallid, undervitalized, shy, sensitive creatures, whose only birthright is an aptitude for learning, — even these poor

New England Brahmins of ours, *subvirates* of an organizable base as they often are, count as full men, if their courage is big enough for the uniform which hangs so loosely about their slender figures.

A young man was drowned not very long ago in the river running under our windows. A few days afterwards a field-piece was dragged to the water's edge, and fired many times over the river. We asked a bystander, who looked like a fisherman, what that was for. It was to "break the gall," he said, and so bring the drowned person to the surface. A strange physiological fancy and a very odd *non sequitur*; but that is not our present point. A good many extraordinary objects do really come to the surface when the great guns of war shake the waters, as when they roared over Charleston harbor.

Treason came up, hideous, fit only to be huddled into its dishonorable grave. But the wrecks of precious virtues, which had been covered with the waves of prosperity, came up also. And all sorts of unexpected and un-

heard-of things, which had lain unseen during our national life of fourscore years, came up and are coming up daily, shaken from their bed by the concussions of the artillery bellowing around us.

It is a shame to own it, but there were persons otherwise respectable not unwilling to say that they believed the old valor of Revolutionary times had died out from among us. They talked about our own Northern people as the English in the last centuries used to talk about the French, — Goldsmith's old soldier, it may be remembered, called one Englishman good for five of them. As Napoleon spoke of the English, again, as a nation of shopkeepers, so these persons affected to consider the multitude of their countrymen as unwarlike artisans, — forgetting that Paul Revere taught himself the value of liberty in working upon gold, and Nathaniel Greene fitted himself to shape armies in the labor of forging iron.

These persons have learned better now. The bravery of our free working-people was overlaid, but not smothered ; sunken, but not drowned.

The hands which had been busy conquering the elements had only to change their weapons and their adversaries, and they were as ready to conquer the masses of living force opposed to them as they had been to build towns, to dam rivers, to hunt whales, to harvest ice, to hammer brute matter into every shape civilization can ask for.

Another great fact came to the surface, and is coming up every day in new shapes, — that we are one people. It is easy to say that a man is a man in Maine or Minnesota, but not so easy to feel it, all through our bones and marrow. The camp is deprovincializing us very fast. Poor Winthrop, marching with the city *élégants*, seems to have been a little startled to find how wonderfully human were the hard-handed men of the Eighth Massachusetts. It takes all the nonsense out of everybody, or ought to do it, to see how fairly the real manhood of a country is distributed over its surface. And then, just as we are beginning to think our own soil has a monopoly of heroes as well as of cotton, up turns a regiment of gallant Irishmen, like

the Sixty-Ninth, to show us that continental provincialism is as bad as that of Coos County, New Hampshire, or of Broadway, New York.

Here, too, side by side in the same great camp, are half a dozen chaplains, representing half a dozen modes of religious belief. When the masked battery opens, does the "Baptist" Lieutenant believe in his heart that God takes better care of him than of his "Congregationalist" Colonel? Does any man really suppose, that, of a score of noble young fellows who have just laid down their lives for their country, the *Homoousians* are received to the mansions of bliss, and the *Homoiousians* translated from the battle-field to the abodes of everlasting woe? War not only teaches what man can be, but it teaches also what he must not be. He must not be a bigot and a fool in the presence of that day of judgment proclaimed by the trumpet which calls to battle, and where a man should have but two thoughts: to do his duty, and trust his Maker. Let our brave dead come back from the fields where they have fallen for

law and liberty, and if you will follow them to their graves, you will find out what the Broad Church means ; the narrow church is sparing of its exclusive formulæ over the coffins wrapped in the flag which the fallen heroes had defended ! Very little comparatively do we hear at such times of the dogmas on which men differ ; very much of the faith and trust in which all sincere Christians can agree. It is a noble lesson, and nothing less noisy than the voice of cannon can teach it so that it shall be heard over all the angry cries of theological disputants.

Now, too, we have a chance to test the sagacity of our friends, and to get at their principles of judgment. Perhaps most of us will agree that our faith in domestic prophets has been diminished by the experience of the last six months. We had the notable predictions attributed to the Secretary of State, which so unpleasantly refused to fulfil themselves. We were infested at one time with a set of ominous-looking seers, who shook their heads and muttered obscurely about some mighty preparations

that were making to substitute the rule of the minority for that of the majority. Organizations were darkly hinted at ; some thought our armories would be seized ; and there are not wanting ancient women in the neighboring University town who consider that the country was saved by the intrepid band of students who stood guard, night after night, over the G. R. cannon and the pile of balls in the Cambridge Arsenal.

As a general rule, it is safe to say that the best prophecies are those which the sages *remember* after the event prophesied of has come to pass, and remind us that they have made long ago. Those who are rash enough to predict publicly beforehand commonly give us what they hope, or what they fear, or some conclusion from an abstraction of their own, or some guess founded on private information not half so good as what everybody gets who reads the papers, — *never* by any possibility a word that we can depend on, simply because there are cobwebs of contingency between every to-day and to-morrow that no field-glass can penetrate

when fifty of them lie woven one over another. Prophecy as much as you like, but always *hedge*. Say that you think the rebels are weaker than is commonly supposed, but, on the other hand, that they may prove to be even stronger than is anticipated. Say what you like, — only don't be too peremptory and dogmatic ; we *know* that wiser men than you have been notoriously deceived in their predictions in this very matter.

Ibis et redibis nunquam in bello peribis.

Let that be your model ; and remember, on peril of your reputation as a prophet, not to put a stop before or after the *nunquam*.

There are two or three facts connected with *time*, besides that already referred to, which strike us very forcibly in their relation to the great events passing around us. We spoke of the long period seeming to have elapsed since this war began. The buds were then swelling which held the leaves that are still green. It seems as old as Time himself. We cannot fail to observe how the mind brings together the scenes of to-day and those of the old Revolution. We shut up eighty years into each other

like the joints of a pocket-telescope. When the young men from Middlesex dropped in Baltimore the other day, it seemed to bring Lexington and the other Nineteenth of April close to us. War has always been the mint in which the world's history has been coined, and now every day or week or month has a new medal for us. It was Warren that the first impression bore in the last great coinage ; if it is Ellsworth now, the new face hardly seems fresher than the old. All battle-fields are alike in their main features. The young fellows who fell in our earlier struggle seemed like old men to us until within these few months ; now we remember they were like these fiery youth we are cheering as they go to the fight ; it seems as if the grass of our bloody hillside was crimsoned but yesterday, and the cannon-ball imbedded in the church-tower would feel warm, if we laid our hand upon it.

Nay, in this our quickened life we feel that all the battles from earliest time to our own day, where Right and Wrong have grappled, are but one great battle, varied with brief pauses or hasty bivouacs upon the field of conflict. The

issues seem to vary, but it is always a right against a claim, and, however the struggle of the hour may go, a movement onward of the campaign, which uses defeat as well as victory to serve its mighty ends. The very weapons of our warfare change less than we think. Our bullets and cannon-balls have lengthened into bolts like those which whistled out of old arba-lests. Our soldiers fight with bowie-knives, such as are pictured on the walls of Theban tombs, wearing a newly invented head-gear as old as the days of the Pyramids.

Whatever miseries this war brings upon us, it is making us wiser, and, we trust, better. Wiser, for we are learning our weakness, our narrowness, our selfishness, our ignorance, in lessons of sorrow and shame. Better, because all that is noble in men and women is demanded by the time, and our people are rising to the standard the time calls for. For this is the question the hour is putting to each of us: Are you ready, if need be, to sacrifice all that you have and hope for in this world, that the generations to follow you may inherit a whole country whose natural condition shall be peace, and

not a broken province which must live under the perpetual threat, if not in the constant presence, of war and all that war brings with it? If we are all ready for this sacrifice, battles may be lost, but the campaign and its grand object must be won.

Heaven is very kind in its way of putting questions to mortals. We are not abruptly asked to give up all that we most care for, in view of the momentous issues before us. Perhaps we shall never be asked to give up all, but we have already been called upon to part with much that is dear to us, and should be ready to yield the rest as it is called for. The time may come when even the cheap public print shall be a burden our means cannot support, and we can only listen in the square that was once the market-place to the voices of those who proclaim defeat or victory. Then there will be only our daily food left. When we have nothing to read and nothing to eat, it will be a favorable moment to offer a compromise. At present we have all that nature absolutely demands, — we can live on bread and the newspaper.

MY HUNT AFTER "THE CAPTAIN."

I N the dead of the night which closed upon the bloody field of Antietam, my household was startled from its slumbers by the loud summons of a telegraphic messenger. The air had been heavy all day with rumors of battle, and thousands and tens of thousands had walked the streets with throbbing hearts, in dread anticipation of the tidings any hour might bring.

We rose hastily, and presently the messenger was admitted. I took the envelope from his hand, opened it, and read:—

HAGERSTOWN 17th

To ——— H——

Capt H—— wounded shot through the neck
thought not mortal at Keedysville

WILLIAM G LEDUC

Through the neck, — no bullet left in wound. Windpipe, food-pipe, carotid, jugular, half a dozen smaller, but still formidable vessels, a great braid of nerves, each as big as a lamp-wick, spinal cord, — ought to kill at once, if at all. *Thought not* mortal, or *not thought* mortal, — which was it? The first; that is better than the second would be. — "Keedysville, a post-office, Washington Co., Maryland." Leduc? Leduc? Don't remember that name. — The boy is waiting for his money. A dollar and thirteen cents. Has nobody got thirteen cents? Don't keep that boy waiting, — how do we know what messages he has got to carry?

The boy *had* another message to carry. It was to the father of Lieutenant-Colonel Wilder Dwight, informing him that his son was grievously wounded in the same battle, and was lying at Boonsborough, a town a few miles this side of Keedysville. This I learned the next morning from the civil and attentive officials at the Central Telegraph-Office.

Calling upon this gentleman, I found that he meant to leave in the quarter past two o'clock

train, taking with him Dr. George H. Gay, an accomplished and energetic surgeon, equal to any difficult question or pressing emergency. I agreed to accompany them, and we met in the cars. I felt myself peculiarly fortunate in having companions whose society would be a pleasure, whose feelings would harmonize with my own, and whose assistance I might, in case of need, be glad to claim.

It is of the journey which we began together, and which I finished apart, that I mean to give my "Atlantic" readers an account. They must let me tell my story in my own way, speaking of many little matters that interested or amused me, and which a certain leisurely class of elderly persons, who sit at their firesides and never travel, will, I hope, follow with a kind of interest. For, besides the main object of my excursion, I could not help being excited by the incidental sights and occurrences of a trip which to a commercial traveller or a newspaper-reporter would seem quite commonplace and undeserving of record. There are periods in which all places and people seem to be in a

conspiracy to impress us with their individuality, — in which every ordinary locality seems to assume a special significance and to claim a particular notice, — in which every person we meet is either an old acquaintance or a character ; days in which the strangest coincidences are continually happening, so that they get to be the rule, and not the exception. Some might naturally think that anxiety and the weariness of a prolonged search after a near relative would have prevented my taking any interest in or paying any regard to the little matters around me. Perhaps it had just the contrary effect, and acted like a diffused stimulus upon the attention. When all the faculties are wide-awake in pursuit of a single object, or fixed in the spasm of an absorbing emotion, they are oftentimes clairvoyant in a marvellous degree in respect to many collateral things, as Wordsworth has so forcibly illustrated in his sonnet on the Boy of Windermere, and as Hawthorne has developed with such metaphysical accuracy in that chapter of his wondrous story where Hester walks forth to meet her punishment.

Be that as it may, — though I set out with a full and heavy heart, though many times my blood chilled with what were perhaps needless and unwise fears, though I broke through all my habits without thinking about them, which is almost as hard in certain circumstances as for one of our young fellows to leave his sweetheart and go into a Peninsular campaign, though I did not always know when I was hungry nor discover that I was thirsting, though I had a worrying ache and inward tremor underlying all the outward play of the senses and the mind, yet it is the simple truth that I did look out of the car-windows with an eye for all that passed, that I did take cognizance of strange sights and singular people, that I did act much as persons act from the ordinary promptings of curiosity, and from time to time even laugh very nearly as those do who are attacked with a convulsive sense of the ridiculous, the epilepsy of the diaphragm.

By a mutual compact, we talked little in the cars. A communicative friend is the greatest nuisance to have at one's side during a railroad-

journey, especially if his conversation is stimulating and in itself agreeable. "A fast train and a 'slow' neighbor," is my motto. Many times, when I have got upon the cars, expecting to be magnetized into an hour or two of blissful reverie, my thoughts shaken up by the vibrations into all sorts of new and pleasing patterns, arranging themselves in curves and nodal points, like the grains of sand in Chladni's famous experiment, — fresh ideas coming up to the surface, as the kernels do when a measure of corn is jolted in a farmer's wagon, — all this without volition, the mechanical impulse alone keeping the thoughts in motion, as the mere act of carrying certain watches in the pocket keeps them wound up, — many times, I say, just as my brain was beginning to creep and hum with this delicious locomotive intoxication, some dear detestable friend, cordial, intelligent, social, radiant, has come up and sat down by me and opened a conversation which has broken my day-dream, unharnessed the flying horses that were whirling along my fancies and hitched on the old weary omnibus-team of every-day as-

sociations, fatigued my hearing and attention, exhausted my voice, and milked the breasts of my thought dry during the hour when they should have been filling themselves full of fresh juices. My friends spared me this trial.

So, then, I sat by the window and enjoyed the slight tipsiness produced by short, limited, rapid oscillations, which I take to be the exhilarating stage of that condition which reaches hopeless inebriety in what we know as sea-sickness. Where the horizon opened widely, it pleased me to watch the curious effect of the rapid movement of near objects contrasted with the slow motion of distant ones. Looking from a right-hand window, for instance, the fences close by glide swiftly backward, or to the right, while the distant hills not only do not appear to move backward, but look by contrast with the fences near at hand as if they were moving forward, or to the left; and thus the whole landscape becomes a mighty wheel revolving about an imaginary axis somewhere in the middle-distance.

My companions proposed to stay at one of

the best-known and longest-established of the New-York caravansaries, and I accompanied them. We were particularly well lodged, and not uncivilly treated. The traveller who supposes that he is to repeat the melancholy experience of Shenstone, and have to sigh over the reflection that he has found "his warmest welcome at an inn," has something to learn at the offices of the great city hotels. The unheralded guest who is honored by mere indifference may think himself blessed with singular good-fortune. If the despot of the Patent-Annunciator is only mildly contemptuous in his manner, let the victim look upon it as a personal favor. The coldest welcome that a threadbare curate ever got at the door of a bishop's palace, the most icy reception that a country cousin ever received at the city mansion of a mushroom millionaire, is agreeably tepid, compared to that which the Rhadamanthus who dooms you to the more or less elevated circle of his inverted Inferno vouchsafes, as you step up to enter your name on his dog's-eared register. I have less hesitation in unburdening myself of this uncom-

fortable statement, as on this particular trip I met with more than one exception to the rule. Officials become brutalized, I suppose, as a matter of course. One cannot expect an office clerk to embrace tenderly every stranger who comes in with a carpet-bag, or a telegraph operator to burst into tears over every unpleasant message he receives for transmission. Still, humanity is not always totally extinguished in these persons. I discovered a youth in a telegraph-office of the Continental Hotel, in Philadelphia, who was as pleasant in conversation, and as graciously responsive to inoffensive questions, as if I had been his childless opulent uncle and my will not made.

On the road again the next morning, over the ferry, into the cars with sliding panels and fixed windows, so that in summer the whole side of the car may be made transparent. New Jersey is, to the apprehension of a traveller, a double-headed suburb rather than a State. Its dull red dust looks like the dried and powdered mud of a battle-field. Peach-trees are common, and champagne-orchards. Canal-boats,

drawn by mules, swim by, feeling their way along like blind men led by dogs. I had a mighty passion come over me to be the captain of one, — to glide back and forward upon a sea never roughened by storms, — to float where I could not sink, — to navigate where there is no shipwreck, — to lie languidly on the deck and govern the huge craft by a word or the movement of a finger: there was something of railroad intoxication in the fancy; but who has not often envied a cobbler in his stall?

The boys cry the "N'-York *Heddle*," instead of "Herald"; I remember that years ago in Philadelphia; we must be getting near the farther end of the dumb-bell suburb. A bridge has been swept away by a rise of the waters, so we must approach Philadelphia by the river. Her physiognomy is not distinguished; *nez camus*, as a Frenchman would say; no illustrious steeple, no imposing tower; the water-edge of the town looking bedraggled, like the flounce of a vulgar rich woman's dress that trails on the sidewalk. The New Ironsides lies at one of the wharves, elephantine in bulk and color, her

sides narrowing as they rise, like the walls of a hock-glass.

I went straight to the house in Walnut Street where the Captain would be heard of, if anywhere in this region. His lieutenant-colonel was there gravely wounded ; his college-friend and comrade in arms, a son of the house, was there, injured in a similar way ; another soldier, brother of the last, was there, prostrate with fever. A fourth bed was waiting ready for the Captain, but not one word had been heard of him, though inquiries had been made in the towns from and through which the father had brought his two sons and the lieutenant-colonel. And so my search is, like a " Ledger " story, to be continued.

I rejoined my companions in time to take the noon-train for Baltimore. Our company was gaining in number as it moved onwards. We had found upon the train from New York a lovely, lonely lady, the wife of one of our most spirited Massachusetts officers, the brave Colonel of the ——th Regiment, going to seek her wounded husband at Middletown, a place lying

directly in our track. She was the light of our party while we were together on our pilgrimage, a fair, gracious woman, gentle, but courageous,

—— "ful plesant and amiable of port,
—— estatelich of manere,
And to ben holden digne of reverence."

On the road from Philadelphia, I found in the same car with our party Dr. William Hunt, of Philadelphia, who had most kindly and faithfully attended the Captain, then the Lieutenant, after a wound received at Ball's Bluff, which came very near being mortal. He was going upon an errand of mercy to the wounded, and found he had in his memorandum-book the name of our lady's husband, the Colonel, who had been commended to his particular attention.

Not long after leaving Philadelphia, we passed a solitary sentry keeping guard over a short railroad-bridge. It was the first evidence that we were approaching the perilous borders, the marches where the North and the South mingle their angry hosts, where the extremes of our so-called civilization meet in conflict, and the fierce slave-driver of the Lower Mississippi

stares into the stern eyes of the forest-feller from the banks of the Aroostook. All the way along, the bridges were guarded more or less strongly. In a vast country like ours, communications play a far more complex part than in Europe, where the whole territory available for strategic purposes is so comparatively limited. Belgium, for instance, has long been the bowling-alley where kings roll cannon-balls at each other's armies; but here we are playing the game of live ninepins *without any alley*.

We were obliged to stay in Baltimore overnight, as we were too late for the train to Frederick. At the Eutaw House, where we found both comfort and courtesy, we met a number of friends, who beguiled the evening hours for us in the most agreeable manner. We devoted some time to procuring surgical and other articles, such as might be useful to our friends, or to others, if our friends should not need them. In the morning, I found myself seated at the breakfast-table next to General Wool. It did not surprise me to find the General very far from expansive. With Fort McHenry on his

shoulders and Baltimore in his breeches-pocket, and the weight of a military department loading down his social safety-valves, I thought it a great deal for an officer in his trying position to select so very obliging and affable an aid as the gentleman who relieved him of the burden of attending to strangers.

We left the Eutaw House, to take the cars for Frederick. As we stood waiting on the platform, a telegraphic message was handed in silence to my companion. Sad news: the lifeless body of the son he was hastening to see was even now on its way to him in Baltimore. It was no time for empty words of consolation: I knew what he had lost, and that now was not the time to intrude upon a grief borne as men bear it, felt as women feel it.

Colonel Wilder Dwight was first made known to me as the friend of a beloved relative of my own, who was with him during a severe illness in Switzerland, and for whom while living, and for whose memory when dead, he retained the warmest affection. Since that, the story of his noble deeds of daring, of his capture and es-

cape, and a brief visit home before he was able to rejoin his regiment, had made his name familiar to many among us, myself among the number. His memory has been honored by those who had the largest opportunity of knowing his rare promise, as a man of talents and energy of nature. His abounding vitality must have produced its impression on all who met him ; there was a still fire about him which any one could see would blaze up to melt all difficulties and recast obstacles into implements in the mould of an heroic will. These elements of his character many had the chance of knowing ; but I shall always associate him with the memory of that pure and noble friendship which made me feel that I knew him before I looked upon his face, and added a personal tenderness to the sense of loss which I share with the whole community.

Here, then, I parted, sorrowfully, from the companions with whom I set out on my journey.

In one of the cars, at the same station, we met General Shriver, of Frederick, a most loyal

Unionist, whose name is synonymous with a hearty welcome to all whom he can aid by his counsel and his hospitality. He took great pains to give us all the information we needed, and expressed the hope, which was afterwards fulfilled, to the great gratification of some of us, that we should meet again when he should return to his home.

There was nothing worthy of special note in the trip to Frederick, except our passing a squad of Rebel prisoners, whom I missed seeing, as they flashed by, but who were said to be a most forlorn-looking crowd of scarecrows. Arrived at the Monocacy River, about three miles this side of Frederick, we came to a halt, for the railroad-bridge had been blown up by the Rebels, and its iron pillars and arches were lying in the bed of the river. The unfortunate wretch who fired the train was killed by the explosion, and lay buried hard by, his hands sticking out of the shallow grave into which he had been huddled. This was the story they told us, but whether true or not I must leave to the correspondents of "Notes and Queries" to settle.

There was a great confusion of carriages and wagons at the stopping-place of the train, so that it was a long time before I could get anything that would carry us. At last I was lucky enough to light on a sturdy wagon, drawn by a pair of serviceable bays, and driven by James Grayden, with whom I was destined to have a somewhat continued acquaintance. We took up a little girl who had been in Baltimore during the late Rebel inroad. It made me think of the time when my own mother, at that time six years old, was hurried off from Boston, then occupied by the British soldiers, to Newburyport, and heard the people saying that "the redcoats were coming, killing and murdering everybody as they went along." Frederick looked cheerful for a place that had so recently been in an enemy's hands. Here and there a house or shop was shut up, but the national colors were waving in all directions, and the general aspect was peaceful and contented. I saw no bullet-marks or other sign of the fighting which had gone on in the streets. The Colonel's lady was taken in charge by a daugh-

ter of that hospitable family to which we had been commended by its head, and I proceeded to inquire for wounded officers at the various temporary hospitals.

At the United States Hotel, where many were lying, I heard mention of an officer in an upper chamber, and, going there, found Lieutenant Abbott, of the Twentieth Massachusetts Volunteers, lying ill with what looked like typhoid fever. While there, who should come in but the almost ubiquitous Lieutenant Wilkins, of the same Twentieth, whom I had met repeatedly before on errands of kindness or duty, and who was just from the battle-ground. He was going to Boston in charge of the body of the lamented Dr. Revere, the Assistant Surgeon of the regiment, killed on the field. From his lips I learned something of the mishaps of the regiment. My Captain's wound he spoke of as less grave than at first thought; but he mentioned incidentally having heard a story recently that he was *killed*, — a fiction, doubtless, — a mistake, — a palpable absurdity, — not to be remembered or made any account

of. O no! but what dull ache is this in that obscurely sensitive region, somewhere below the heart, where the nervous centre called the *semilunar ganglion* lies unconscious of itself until a great grief or a mastering anxiety reaches it through all the non-conductors which isolate it from ordinary impressions? I talked awhile with Lieutenant Abbott, who lay prostrate, feeble, but soldier-like and uncomplaining, carefully waited upon by a most excellent lady, a captain's wife, New-England-born, loyal as the Liberty on a golden ten-dollar piece, and of lofty bearing enough to have sat for that goddess's portrait. She had stayed in Frederick through the Rebel inroad, and kept the star-spangled banner where it would be safe, to unroll it as the last Rebel hoofs clattered off from the pavement of the town.

Near by Lieutenant Abbott was an unhappy gentleman, occupying a small chamber, and filling it with his troubles. When he gets well and plump, I know he will forgive me if I confess that I could not help smiling in the midst

of my sympathy for him. He had been a well-favored man, he said, sweeping his hand in a semicircle, which implied that his acute-angled countenance had once filled the goodly curve he described. He was now a perfect Don Quixote to look upon. Weakness had made him querulous, as it does all of us, and he piped his grievances to me in a thin voice, with that finish of detail which chronic invalidism alone can command. He was starving, — he could not get what he wanted to eat. He was in need of stimulants, and he held up a pitiful two-ounce phial containing three thimblefuls of brandy, — his whole stock of that encouraging article. Him I consoled to the best of my ability, and afterwards, in some slight measure, supplied his wants. Feed this poor gentleman up, as these good people soon will, and I should not know him, nor he himself. We are all egotists in sickness and debility. An animal has been defined as "a stomach ministered to by organs;" and the greatest man comes very near this simple formula after a month or two of fever and starvation.

James Grayden and his team pleased me well enough, and so I made a bargain with him to take us, the lady and myself, on our further journey as far as Middletown. As we were about starting from the front of the United States Hotel, two gentlemen presented themselves and expressed a wish to be allowed to share our conveyance. I looked at them and convinced myself that they were neither Rebels in disguise, nor deserters, nor camp-followers, nor miscreants, but plain, honest men on a proper errand. The first of them I will pass over briefly. He was a young man of mild and modest demeanor, chaplain to a Pennsylvania regiment, which he was going to rejoin. He belonged to the Moravian Church, of which I had the misfortune to know little more than what I had learned from Southey's "Life of Wesley," and from the exquisite hymns we have borrowed from its rhapsodists. The other stranger was a New-Englander of respectable appearance, with a grave, hard, honest, hay-bearded face, who had come to serve the sick and wounded on the battle-field and in its immedi-

ate neighborhood. There is no reason why I should not mention his name, but I shall content myself with calling him the Philanthropist.

So we set forth, the sturdy wagon, the serviceable bays, with James Grayden their driver, the gentle lady, whose serene patience bore up through all delays and discomforts, the Chaplain, the Philanthropist, and myself, the teller of this story.

And now, as we emerged from Frederick, we struck at once upon the trail from the great battle-field. The road was filled with straggling and wounded soldiers. All who could travel on foot — multitudes with slight wounds of the upper limbs, the head or face — were told to take up their beds — a light burden or none at all — and walk. Just as the battle-field sucks everything into its red vortex for the conflict, so does it drive everything off in long, diverging rays after the fierce centripetal forces have met and neutralized each other. For more than a week there had been sharp fighting all along this road. Through the streets of Fred-

erick, through Crampton's Gap, over South Mountain, sweeping at last the hills and the woods that skirt the windings of the Antietam, the long battle had travelled, like one of those tornadoes which tear their path through our fields and villages. The slain of higher condition, "embalmed" and iron-cased, were sliding off on the railways to their far homes; the dead of the rank-and-file were being gathered up and committed hastily to the earth; the gravely wounded were cared for hard by the scene of conflict, or pushed a little way along to the neighboring villages; while those who could walk were meeting us, as I have said, at every step in the road. It was a pitiable sight, truly pitiable, yet so vast, so far beyond the possibility of relief, that many single sorrows of small dimensions have wrought upon my feelings more than the sight of this great caravan of maimed pilgrims. The companionship of so many seemed to make a joint-stock of their suffering; it was next to impossible to individualize it, and so bring it home as one can do with a single broken limb or aching wound.

Then they were all of the male sex, and in the freshness or the prime of their strength. Though they tramped so wearily along, yet there was rest and kind nursing in store for them. These wounds they bore would be the medals they would show their children and grandchildren by and by. Who would not rather wear his decorations beneath his uniform than on it ?

Yet among them were figures which arrested our attention and sympathy. Delicate boys, with more spirit than strength, flushed with fever or pale with exhaustion or haggard with suffering, dragged their weary limbs along as if each step would exhaust their slender store of strength. At the roadside sat or lay others, quite spent with their journey. Here and there was a house at which the wayfarers would stop, in the hope, I fear often vain, of getting refreshment ; and in one place was a clear, cool spring, where the little bands of the long procession halted for a few moments, as the trains that traverse the desert rest by its fountains. My companions had brought a few peaches

along with them, which the Philanthropist bestowed upon the tired and thirsty soldiers with a satisfaction which we all shared. I had with me a small flask of strong waters, to be used as a medicine in case of inward grief. From this, also, he dispensed relief, without hesitation, to a poor fellow who looked as if he needed it. I rather admired the simplicity with which he applied my limited means of solace to the first-comer who wanted it more than I; a genuine benevolent impulse does not stand on ceremony, and had I perished of colic for want of a stimulus that night, I should not have reproached my friend the Philanthropist, any more than I grudged my other ardent friend the two dollars and more which it cost me to send the charitable message he left in my hands.

It was a lovely country through which we were riding. The hillsides rolled away into the distance, slanting up fair and broad to the sun, as one sees them in the open parts of the Berkshire Valley, at Lanesborough, for instance, or in the many-hued mountain-chalice at the bottom of which the Shaker houses of Lebanon

have shaped themselves like a sediment of cubical crystals. The wheat was all garnered, and the land ploughed for a new crop. There was Indian-corn standing, but I saw no pumpkins warming their yellow carapaces in the sunshine like so many turtles; only in a single instance did I notice some wretched little miniature specimens in form and hue not unlike those colossal oranges of our cornfields. The rail-fences were somewhat disturbed, and the cinders of extinguished fires showed the use to which they had been applied. The houses along the road were not for the most part neatly kept; the garden fences were poorly built of laths or long slats, and very rarely of trim aspect. The men of this region seemed to ride in the saddle very generally, rather than drive. They looked sober and stern, less curious and lively than Yankees, and I fancied that a type of features familiar to us in the countenance of the late John Tyler, our accidental President, was frequently met with. The women were still more distinguishable from our New-England pattern. Soft, sallow, succulent, delicately

finished about the mouth and firmly shaped about the chin, dark-eyed, full-throated, they looked as if they had been grown in a land of olives. There was a little toss in their movement, full of muliebrity. I fancied there was something more of the duck and less of the chicken about them, as compared with the daughters of our leaner soil ; but these are mere impressions caught from stray glances, and if there is any offence in them, my fair readers may consider them all retracted.

At intervals, a dead horse lay by the roadside, or in the fields, unburied, not grateful to gods or men. I saw no bird of prey, no ill-omened fowl, on my way to the carnival of death, or at the place where it was held. The vulture of story, the crow of Talavera, the "twa corbies" of the ghastly ballad, are all from Nature, doubtless ; but no black wing was spread over these animal ruins, and no call to the banquet pierced through the heavy-laden and sickening air.

Full in the middle of the road, caring little for whom or what they met, came long strings

of army-wagons, returning empty from the front after supplies. James Grayden stated it as his conviction that they had a little rather run into a fellow than not. I liked the looks of these equipages and their drivers ; they meant business. Drawn by mules mostly, six, I think, to a wagon, powdered well with dust, wagon, beast, and driver, they came jogging along the road, turning neither to right nor left, — some driven by bearded, solemn white men, some by careless, saucy-looking negroes, of a blackness like that of anthracite or obsidian. There seemed to be nothing about them, dead or alive, that was not serviceable. Sometimes a mule would give out on the road ; then he was left where he lay, until by and by he would think better of it, and get up, when the first public wagon that came along would hitch him on, and restore him to the sphere of duty.

It was evening when we got to Middletown. The gentle lady who had graced our homely conveyance with her company here left us. She found her husband, the gallant Colonel, in very comfortable quarters, well cared for, very

weak from the effects of the fearful operation he had been compelled to undergo, but showing the same calm courage to endure as he had shown manly energy to act. It was a meeting full of heroism and tenderness, of which I heard more than there is need to tell. Health to the brave soldier, and peace to the household over which so fair a spirit presides !

Dr. Thompson, the very active and intelligent surgical director of the hospitals of the place, took me in charge. He carried me to the house of a worthy and benevolent clergyman of the German Reformed Church, where I was to take tea and pass the night. What became of the Moravian chaplain I did not know ; but my friend the Philanthropist had evidently made up his mind to adhere to my fortunes. He followed me, therefore, to the house of the "Dominie," as a newspaper-correspondent calls my kind host, and partook of the fare there furnished me. He withdrew with me to the apartment assigned for my slumbers, and slept sweetly on the same pillow where I waked and tossed. Nay, I do affirm that he

did, unconsciously, I believe, encroach on that moiety of the couch which I had flattered myself was to be my own through the watches of the night, and that I was in serious doubt at one time whether I should not be gradually, but irresistibly, expelled from the bed which I had supposed destined for my sole possession. As Ruth clave unto Naomi, so my friend the Philanthropist clave unto me. "Whither thou goest, I will go ; and where thou lodgest, I will lodge." A really kind, good man, full of zeal, determined to help somebody, and absorbed in his one thought, he doubted nobody's willingness to serve him, going, as he was, on a purely benevolent errand. When he reads this, as I hope he will, let him be assured of my esteem and respect ; and if he gained any accommodation from being in my company, let me tell him that I learned a lesson from his active benevolence. I could, however, have wished to hear him laugh once before we parted, perhaps forever. He did not, to the best of my recollection, even smile during the whole period that we were in company. I am afraid that a light-

some disposition and a relish for humor are not so common in those whose benevolence takes an active turn as in people of sentiment, who are always ready with their tears and abounding in passionate expressions of sympathy. Working philanthropy is a practical specialty, requiring not a mere impulse, but a talent, with its peculiar sagacity for finding its objects, a tact for selecting its agencies, an organizing and arranging faculty, a steady set of nerves, and a constitution such as Sallust describes in Catiline, patient of cold, of hunger, and of watching. Philanthropists are commonly grave, occasionally grim, and not very rarely morose. Their expansive social force is imprisoned as a working power, to show itself only through its legitimate pistons and cranks. The tighter the boiler, the less it whistles and sings at its work. When Dr. Waterhouse, in 1780, travelled with Howard, on his tour among the Dutch prisons and hospitals, he found his temper and manners very different from what would have been expected.

My benevolent companion having already

made a preliminary exploration of the hospitals of the place, before sharing my bed with him, as above mentioned, I joined him in a second tour through them. *The authorities of Middletown are evidently leagued with the surgeons of that place, for such a break-neck succession of pitfalls and chasms I have never seen in the streets of a civilized town. It was getting late in the evening when we began our rounds. The principal collections of the wounded were in the churches. Boards were laid over the tops of the pews, on these some straw was spread, and on this the wounded lay, with little or no covering other than such scanty clothes as they had on. There were wounds of all degrees of severity, but I heard no groans or murmurs. Most of the sufferers were hurt in the limbs, some had undergone amputation, and all had, I presume, received such attention as was required. Still, it was but a rough and dreary kind of comfort that the extemporized hospitals suggested. I could not help thinking the patients must be cold ; but they were used to camp life, and did not complain. The men

who watched were not of the soft-handed variety of the race. One of them was smoking his pipe as he went from bed to bed. I saw one poor fellow who had been shot through the breast; his breathing was labored, and he was tossing, anxious and restless. The men were debating about the opiate he was to take, and I was thankful that I happened there at the right moment to see that he was well narcotized for the night. Was it possible that my Captain could be lying on the straw in one of these places? Certainly possible, but not probable; but as the lantern was held over each bed, it was with a kind of thrill that I looked upon the features it illuminated. Many times as I went from hospital to hospital in my wanderings, I started at some faint resemblance — the shade of a young man's hair, the outline of his half-turned face — recalled the presence I was in search of. The face would turn towards me, and the momentary illusion would pass away, but still the fancy clung to me. There was no figure huddled up on its rude couch, none stretched at the roadside, none toiling languidly

along the dusty pike, none passing in car or in ambulance, that I did not scrutinize, as if it might be that for which I was making my pilgrimage to the battle-field.

"There are two wounded Secesh," said my companion. I walked to the bedside of the first, who was an officer, a lieutenant, if I remember right, from North Carolina. He was of good family, son of a judge in one of the higher courts of his State, educated, pleasant, gentle, intelligent. One moment's intercourse with such an enemy, lying helpless and wounded among strangers, takes away all personal bitterness towards those with whom we or our children have been but a few hours before in deadly strife. The basest lie which the murderous contrivers of this Rebellion have told is that which tries to make out a difference of race in the men of the North and South. It would be worth a year of battles to abolish this delusion, though the great sponge of war that wiped it out were moistened with the best blood of the land. My Rebel was of slight, scholastic habit, and spoke as one accustomed to tread

carefully among the parts of speech. It made my heart ache to see him, a man finished in the humanities and Christian culture, whom the sin of his forefathers and the crime of his rulers had set in barbarous conflict against others of like training with his own, — a man who, but for the curse which our generation is called on to expiate, would have taken his part in the beneficent task of shaping the intelligence and lifting the moral standard of a peaceful and united people.

On Sunday morning, the twenty-first, having engaged James Grayden and his team, I set out with the Chaplain and the Philanthropist for Keedysville. Our track lay through the South-Mountain Gap, and led us first to the town of Boonsborough, where, it will be remembered, Colonel Dwight had been brought after the battle. We saw the positions occupied in the Battle of South Mountain, and many traces of the conflict. In one situation a group of young trees was marked with shot, hardly one having escaped. As we walked by the side of the wagon, the Philanthropist left us for a while and climbed

a hill, where, along the line of a fence, he found traces of the most desperate fighting. A ride of some three hours brought us to Boonsborough, where I roused the unfortunate army-surgeon who had charge of the hospitals, and who was trying to get a little sleep after his fatigues and watchings. He bore this cross very creditably, and helped me to explore all places where my soldier might be lying among the crowds of wounded. After the useless search, I resumed my journey, fortified with a note of introduction to Dr. Letterman; also with a bale of oakum which I was to carry to that gentleman, this substance being employed as a substitute for lint. We were obliged also to procure a pass to Keedysville from the Provost-Marshal of Boonsborough. As we came near the place, we learned that General McClellan's head-quarters had been removed from this village some miles farther to the front.

On entering the small settlement of Keedysville, a familiar face and figure blocked the way, like one of Bunyan's giants. The tall form and benevolent countenance, set off by long, flowing

hair, belonged to the excellent Mayor Frank B. Fay, of Chelsea, who, like my Philanthropist, only still more promptly, had come to succor the wounded of the great battle. It was wonderful to see how his single personality pervaded this torpid little village; he seemed to be the centre of all its activities. All my questions he answered clearly and decisively, as one who knew everything that was going on in the place. But the one question I had come five hundred miles to ask, — *Where is Captain H.?* — he could not answer. There were some thousands of wounded in the place, he told me, scattered about everywhere. It would be a long job to hunt up my Captain; the only way would be to go to every house and ask for him. Just then a medical officer came up.

"Do you know anything of Captain H., of the Massachusetts Twentieth?"

"O yes; he is staying in that house. I saw him there, doing very well."

A chorus of hallelujahs arose in my soul, but I kept them to myself. Now, then, for our twice-wounded volunteer, our young centurion whose

double-barred shoulder-straps we have never yet looked upon. Let us observe the proprieties, however ; no swelling upward of the mother, — no *hysterica passio*, — we do not like scenes. A calm salutation, — then swallow and hold hard. That is about the programme.

A cottage of squared logs, filled in with plaster, and whitewashed. A little yard before it, with a gate swinging. The door of the cottage ajar, — no one visible as yet. I push open the door and enter. An old woman, *Margaret Kitzmuller* her name proves to be, is the first person I see.

"Captain H. here?"

"O no, Sir, — left yesterday morning for Hagerstown, — in a milk-cart."

The Kitzmuller is a beady-eyed, cheery-looking ancient woman, answers questions with a rising inflection, and gives a good account of the Captain, who got into the vehicle without assistance, and was in excellent spirits. Of course he had struck for Hagerstown as the terminus of the Cumberland Valley Railroad, and was on his way to Philadelphia, *viâ* Chambersburg and Harrisburg, if he were not already in the hos-

pitiable home of Walnut Street, where his friends were expecting him.

I might follow on his track or return upon my own; the distance was the same to Philadelphia through Harrisburg as through Baltimore. But it was very difficult, Mr. Fay told me, to procure any kind of conveyance to Hagerstown; and, on the other hand, I had James Grayden and his wagon to carry me back to Frederick. It was not likely that I should overtake the object of my pursuit with nearly thirty-six hours start, even if I could procure a conveyance that day. In the mean time James was getting impatient to be on his return, according to the direction of his employers. So I decided to go back with him.

But there was the great battle-field only about three miles from Keedysville, and it was impossible to go without seeing that. James Grayden's directions were peremptory, but it was a case for the higher law. I must make a good offer for an extra couple of hours, such as would satisfy the owners of the wagon, and enforce it by a personal motive. I did this handsomely,

and succeeded without difficulty. To add brilliancy to my enterprise, I invited the Chaplain and the Philanthropist to take a free passage with me.

We followed the road through the village for a space, then turned off to the right, and wandered somewhat vaguely, for want of precise directions, over the hills. Inquiring as we went, we forded a wide creek in which soldiers were washing their clothes, the name of which we did not then know, but which must have been the Antietam. At one point we met a party, women among them, bringing off various trophies they had picked up on the battle-field. Still wandering along, we were at last pointed to a hill in the distance, a part of the summit of which was covered with Indian-corn. There, we were told, some of the fiercest fighting of the day had been done. The fences were taken down so as to make a passage across the fields, and the tracks worn within the last few days looked like old roads. We passed a fresh grave under a tree near the road. A board was nailed to the tree, bearing the name, as well as I could make

it out, of Gardiner, of a New-Hampshire regiment.

On coming near the brow of the hill, we met a party carrying picks and spades. "How many?" "Only one." The dead were nearly all buried, then, in this region of the field of strife. We stopped the wagon, and, getting out, began to look around us. Hard by was a large pile of muskets, scores, if not hundreds, which had been picked up, and were guarded for the Government. A long ridge of fresh gravel rose before us. A board stuck up in front of it bore this inscription, the first part of which was, I believe, not correct: "The Rebel General Anderson and 80 Rebels are buried in this hole." Other smaller ridges were marked with the number of dead lying under them. The whole ground was strewn with fragments of clothing, haversacks, canteens, cap-boxes, bullets, cartridge-boxes, cartridges, scraps of paper, portions of bread and meat. I saw two soldiers' caps that looked as though their owners had been shot through the head. In several places I noticed dark red patches where a pool of blood had

curdled and caked, as some poor fellow poured his life out on the sod. I then wandered about in the cornfield. It surprised me to notice, that, though there was every mark of hard fighting having taken place here, the Indian-corn was not generally trodden down. One of our cornfields is a kind of forest, and even when fighting, men avoid the tall stalks as if they were trees. At the edge of this cornfield lay a gray horse, said to have belonged to a Rebel colonel, who was killed near the same place. Not far off were two dead artillery horses in their harness. Another had been attended to by a burying-party, who had thrown some earth over him; but his last bed-clothes were too short, and his legs stuck out stark and stiff from beneath the gravel coverlet. It was a great pity that we had no intelligent guide to explain to us the position of that portion of the two armies which fought over this ground. There was a shallow trench before we came to the cornfield, too narrow for a road, as I should think, too elevated for a water-course, and which seemed to have been used as a rifle-pit. At any rate, there had been

hard fighting in and about it. This and the cornfield may serve to identify the part of the ground we visited, if any who fought there should ever look over this paper. The opposing tides of battle must have blended their waves at this point, for portions of gray uniform were mingled with the "garments rolled in blood" torn from our own dead and wounded soldiers. I picked up a Rebel canteen, and one of our own, — but there was something repulsive about the trodden and stained relics of the stale battlefield. It was like the table of some hideous orgy left uncleared, and one turned away disgusted from its broken fragments and muddy heel-taps. A bullet or two, a button, a brass plate from a soldier's belt, served well enough for mementos of my visit, with a letter which I picked up, directed to Richmond, Virginia, its seal unbroken. "N. C. Cleveland County. E. Wright to J. Wright." On the other side, "A few lines from W. L. Vaughn," who has just been writing for the wife to her husband, and continues on his own account. The postscript, "tell John that nancy's folks are all well and has a verry

good Little Crop of corn a growing." I wonder, if, by one of those strange chances of which I have seen so many, this number or leaf of the "Atlantic" will not sooner or later find its way to Cleveland County, North Carolina, and E. Wright, widow of James Wright, and Nancy's folks, get from these sentences the last glimpse of husband and friend as he threw up his arms and fell in the bloody cornfield of Antietam? I will keep this stained letter for them until peace comes back, if it comes in my time, and my pleasant North Carolina Rebel of the Middletown Hospital will, perhaps, look these poor people up, and tell them where to send for it.

On the battle-field I parted with my two companions, the Chaplain and the Philanthropist. They were going to the front, the one to find his regiment, the other to look for those who needed his assistance. We exchanged cards and farewells, I mounted the wagon, the horses' heads were turned homewards, my two companions went their way, and I saw them no more. On my way back, I fell into talk with James Grayden. Born in England, Lancashire;

in this country since he was four years old. Had nothing to care for but an old mother; did n't know what he should do if he lost her. Though so long in this country, he had all the simplicity and childlike light-heartedness which belong to the Old World's people. He laughed at the smallest pleasantry, and showed his great white English teeth; he took a joke without retorting by an impertinence; he had a very limited curiosity about all that was going on; he had small store of information; he lived chiefly in his horses, it seemed to me. His quiet animal nature acted as a pleasing anodyne to my recurring fits of anxiety, and I liked his frequent "'Deed I don't know, Sir," better than I have sometimes relished the large discourse of professors and other very wise men.

I have not much to say of the road which we were travelling for the second time. Reaching Middletown, my first call was on the wounded Colonel and his lady. She gave me a most touching account of all the suffering he had gone through with his shattered limb before he succeeded in finding a shelter, showing the ter-

rible want of proper means of transportation of the wounded after the battle. It occurred to me, while at this house, that I was more or less famished, and for the first time in my life I begged for a meal, which the kind family with whom the Colonel was staying most graciously furnished me.

After tea, there came in a stout army-surgeon, a Highlander by birth, educated in Edinburgh, with whom I had pleasant, not unstimulating talk. He had been brought very close to that immane and nefandous Burke-and-Hare business which made the blood of civilization run cold in the year 1828, and told me, in a very calm way, with an occasional pinch from the mull, to refresh his memory, some of the details of those frightful murders, never rivalled in horror until the wretch Dumollard, who kept a private cemetery for his victims, was dragged into the light of day. He had a good deal to say, too, about the Royal College of Surgeons in Edinburgh, and the famous preparations, mercurial and the rest, which I remember well having seen there, — the "*sudabit multum*," and others, — also of

our New York Professor Carnochan's handiwork, a specimen of which I once admired at the New York College. But the doctor was not in a happy frame of mind, and seemed willing to forget the present in the past: things went wrong, somehow, and the time was out of joint with him.

Dr. Thompson, kind, cheerful, companionable, offered me half his own wide bed, in the house of Dr. Baer, for my second night in Middletown. Here I lay awake again another night. Close to the house stood an ambulance in which was a wounded Rebel officer, attended by one of their own surgeons. He was calling out in a loud voice, all night long, as it seemed to me, "Doctor! Doctor! Driver! Water!" in loud, complaining tones, I have no doubt of real suffering, but in strange contrast with the silent patience which was the almost universal rule.

The courteous Dr. Thompson will let me tell here an odd coincidence, trivial, but having its interest as one of a series. The Doctor and myself lay in the bed, and a lieutenant, a friend of his, slept on the sofa. At night, I placed my

match-box, a Scotch one, of the Macpherson-plaid pattern, which I bought years ago, on the bureau, just where I could put my hand upon it. I was the last of the three to rise in the morning, and on looking for my pretty match-box, I found it was gone. This was rather awkward, — not on account of the loss, but of the unavoidable fact that one of my fellow-lodgers must have taken it. I must try to find out what it meant.

"By the way, Doctor, have you seen anything of a little plaid-pattern match-box?"

The Doctor put his hand to his pocket, and, to his own huge surprise and my great gratification, pulled out *two* match-boxes exactly alike, both printed with the Macpherson plaid. One was his, the other mine, which he had seen lying round, and naturally took for his own, thrusting it into his pocket, where it found its twin-brother from the same workshop. In memory of which event, we exchanged boxes, like two Homeric heroes.

This curious coincidence illustrates well enough some supposed cases of *plagiarism*, of

which I will mention one where my name figured. When a little poem called "The Two Streams" was first printed, a writer in the New York "Evening Post" virtually accused the author of it of borrowing the thought from a baccalaureate sermon of President Hopkins, of Williamstown, and printed a quotation from that discourse, which, as I thought, a thief or catchpoll might well consider as establishing a fair presumption that it was so borrowed. I was at the same time wholly unconscious of ever having met with the discourse or the sentence which the verses were most like, nor do I believe I ever had seen or heard either. Some time after this, happening to meet my eloquent cousin, Wendell Phillips, I mentioned the fact to him, and he told me that *he* had once used the special image said to be borrowed, in a discourse delivered at Williamstown. On relating this to my friend Mr. Buchanan Read, he informed me that *he*, too, had used the image, — perhaps referring to his poem called "The Twins." He thought Tennyson had used it also. The parting of the streams on the Alps is poetically

elaborated in a passage attributed to "M. Loisne," printed in the "Boston Evening Transcript" for October 23d, 1859. Captain, afterwards Sir Francis Head, speaks of the showers parting on the Cordilleras, one portion going to the Atlantic, one to the Pacific. I found the image running loose in my mind, without a halter. It suggested itself as an illustration of the will, and I worked the poem out by the aid of Mitchell's School Atlas.—The spores of a great many ideas are floating about in the atmosphere. We no more know where all the growths of our mind came from, than where the lichens which eat the names off from the grave-stones borrowed the germs that gave them birth. The two match-boxes were just alike, but neither was a plagiarism.

In the morning I took to the same wagon once more, but, instead of James Grayden, I was to have for my driver a young man who spelt his name "Phillip Ottenheimer," and whose features at once showed him to be an Israelite. I found him agreeable enough, and disposed to talk. So I asked him many ques-

tions about his religion, and got some answers that sound strangely in Christian ears. He was from Wittenberg, and had been educated in strict Jewish fashion. From his childhood he had read Hebrew, but was not much of a scholar otherwise. A young person of his race lost caste utterly by marrying a Christian. The Founder of our religion was considered by the Israelites to have been "a right smart man, and a great doctor." But the horror with which the reading of the New Testament by any young person of their faith would be regarded was as great, I judged by his language, as that of one of our straitest sectaries would be, if he found his son or daughter perusing the "Age of Reason."

In approaching Frederick, the singular beauty of its clustered spires struck me very much, so that I was not surprised to find "Fair-View" laid down about this point on a railroad-map. I wish some wandering photographer would take a picture of the place, a stereoscopic one, if possible, to show how gracefully, how charmingly, its group of steeples nestles among the

Maryland hills. The town had a poetical look from a distance, as if seers and dreamers might dwell there. The first sign I read, on entering its long street, might perhaps be considered as confirming my remote impression. It bore these words: "Miss Ogle, Past, Present, and Future." On arriving, I visited Lieutenant Abbott, and the attenuated unhappy gentleman, his neighbor, sharing between them as my parting gift what I had left of the balsam known to the Pharmacopœia as *Spiritus Vini Gallici*. I took advantage of General Shriver's always open door to write a letter home, but had not time to partake of his offered hospitality. The railroad-bridge over the Monocacy had been rebuilt since I passed through Frederick, and we trundled along over the track toward Baltimore.

It was a disappointment, on reaching the Eutaw House, where I had ordered all communications to be addressed, to find no telegraphic message from Philadelphia or Boston, stating that Captain H. had arrived at the former place, "wound doing well in good spir-

its expects to leave soon for Boston." After all, it was no great matter; the Captain was, no doubt, snugly lodged before this in the house called Beautiful, at * * * * Walnut Street, where that "grave and beautiful damsel named Discretion" had already welcomed him, smiling, though "the water stood in her eyes," and had "called out Prudence, Piety, and Charity, who, after a little more discourse with him, had him into the family."

The friends I had met at the Eutaw House had all gone but one, the lady of an officer from Boston, who was most amiable and agreeable, and whose benevolence, as I afterwards learned, soon reached the invalids I had left suffering at Frederick. General Wool still walked the corridors, inexpansive, with Fort McHenry on his shoulders, and Baltimore in his breeches-pocket, and his courteous aid again pressed upon me his kind offices. About the doors of the hotel the news-boys cried the papers in plaintive, wailing tones, as different from the sharp accents of their Boston counterparts as a sigh from the southwest is from a north-

eastern breeze. To understand what they said was, of course, impossible to any but an educated ear, and if I made out "Stöarr" and "Clipp'rr," it was because I knew beforehand what must be the burden of their advertising coranach.

I set out for Philadelphia on the morrow, Tuesday the twenty-third, there beyond question to meet my Captain, once more united to his brave wounded companions under that roof which covers a household of as noble hearts as ever throbbed with human sympathies. Back River, Bush River, Gunpowder Creek, — lives there the man with soul so dead that his memory has cerements to wrap up these senseless names in the same envelopes with their meaningless localities? But the Susquehanna, — the broad, the beautiful, the historical, the poetical Susquehanna, — the river of Wyoming and of Gertrude, dividing the shores where

"aye those sunny mountains half-way down
Would echo flageolet from some romantic town," —

did not my heart renew its allegiance to the

poet who has made it lovely to the imagination as well as to the eye, and so identified his fame with the noble stream that it "rolls mingling with his fame forever"? The prosaic traveller perhaps remembers it better from the fact that a great sea-monster, in the shape of a steamboat, takes him, sitting in the car, on its back, and swims across with him like Arion's dolphin, — also that mercenary men on board offer him canvas-backs in the season, and ducks of lower degree at other periods.

At Philadelphia again at last! Drive fast, O colored man and brother, to the house called Beautiful, where my Captain lies sore wounded, waiting for the sound of the chariot-wheels which bring to his bedside the face and the voice nearer than any save one to his heart in this his hour of pain and weakness! Up a long street with white shutters and white steps to all the houses. Off at right angles into another long street with white shutters and white steps to all the houses. Off again at another right angle into still another long street with white shutters and white steps

to all the houses. The natives of this city pretend to know one street from another by some individual differences of aspect; but the best way for a stranger to distinguish the streets he has been in from others is to make a cross or other mark on the white shutters.

This corner-house is the one. Ring softly, —for the Lieutenant-Colonel lies there with a dreadfully wounded arm, and two sons of the family, one wounded like the Colonel, one fighting with death in the fog of a typhoid fever, will start with fresh pangs at the least sound you can make. I entered the house, but no cheerful smile met me. The sufferers were each of them thought to be in a critical condition. The fourth bed, waiting its tenant day after day, was still empty. *Not a word from my Captain.*

Then, foolish, fond body that I was, my heart sank within me. Had he been taken ill on the road, perhaps been attacked with those formidable symptoms which sometimes come on suddenly after wounds that seemed to

be doing well enough, and was his life ebbing away in some lonely cottage, nay, in some cold barn or shed, or at the wayside, unknown, uncared for? Somewhere between Philadelphia and Hagerstown, if not at the latter town, he must be, at any rate. I must sweep the hundred and eighty miles between these places as one would sweep a chamber where a precious pearl had been dropped. I must have a companion in my search, partly to help me look about, and partly because I was getting nervous and felt lonely. *Charley* said he would go with me, — *Charley*, my Captain's beloved friend, gentle, but full of spirit and liveliness, cultivated, social, affectionate, a good talker, a most agreeable letter-writer, observing, with large relish of life, and keen sense of humor. He was not well enough to go, some of the timid ones said; but he answered by packing his carpet-bag, and in an hour or two we were on the Pennsylvania Central Railroad in full blast for Harrisburg.

I should have been a forlorn creature but for the presence of my companion. In his delight-

ful company I half forgot my anxieties, which, exaggerated as they may seem now, were not unnatural after what I had seen of the confusion and distress that had followed the great battle, nay, which seem almost justified by the recent statement that "high officers" were buried after that battle whose names were never ascertained. I noticed little matters, as usual. The road was filled in between the rails with cracked stones, such as are used for Macadamizing streets. They keep the dust down, I suppose, for I could not think of any other use for them. By and by the glorious valley which stretches along through Chester and Lancaster Counties opened upon us. Much as I had heard of the fertile regions of Pennsylvania, the vast scale and the uniform luxuriance of this region astonished me. The grazing pastures were so green, the fields were under such perfect culture, the cattle looked so sleek, the houses were so comfortable, the barns so ample, the fences so well kept, that I did not wonder, when I was told that this region was called the England of Pennsylvania. The people whom we saw were, like the cattle,

well nourished ; the young women looked round and wholesome.

"*Grass makes girls*," I said to my companion, and left him to work out my Orphic saying, thinking to myself, that, as guano makes grass, it was a legitimate conclusion that Ichaboe must be a nursery of female loveliness.

As the train stopped at the different stations, I inquired at each if they had any wounded officers. None as yet ; the red rays of the battle-field had not streamed off so far as this. Evening found us in the cars ; they lighted candles in spring-candle-sticks ; odd enough I thought it in the land of oil-wells and unmeasured floods of kerosene. Some fellows turned up the back of a seat so as to make it horizontal, and began gambling, or pretending to gamble ; it looked as if they were trying to pluck a young countryman ; but appearances are deceptive, and no deeper stake than "drinks for the crowd" seemed at last to be involved. But remembering that murder has tried of late years to establish itself as an institution in the cars, I was less tolerant of the doings of these "sports-

men" who tried to turn our public conveyance into a travelling Frascati. They acted as if they were used to it, and nobody seemed to pay much attention to their manœuvres.

We arrived at Harrisburg in the course of the evening, and attempted to find our way to the Jones House, to which we had been commended. By some mistake, intentional on the part of somebody, as it may have been, or purely accidental, we went to the Herr House instead. I entered my name in the book, with that of my companion. A plain, middle-aged man stepped up, read it to himself in low tones, and coupled to it a literary title by which I have been sometimes known. He proved to be a graduate of Brown University, and had heard a certain Phi Beta Kappa poem delivered there a good many years ago. I remembered it, too; Professor Goddard, whose sudden and singular death left such lasting regret, was the Orator. I recollect that while I was speaking a drum went by the church, and how I was disgusted to see all the heads near the windows thrust out of them, as if the building were on fire. *Cedat*

armis toga. The clerk in the office, a mild, pensive, unassuming young man, was very polite in his manners, and did all he could to make us comfortable. He was of a literary turn, and knew one of his guests in his character of author. At tea, a mild old gentleman, with white hair and beard, sat next us. He, too, had come hunting after his son, a lieutenant in a Pennsylvania regiment. Of these, father and son, more presently.

After tea we went to look up Dr. Wilson, chief medical officer of the hospitals in the place, who was staying at the Brady House. A magnificent old toddy-mixer, Bardolphian in hue, and stern of aspect, as all grog-dispensers must be, accustomed as they are to dive through the features of men to the bottom of their souls and pockets to see whether they are solvent to the amount of sixpence, answered my question by a wave of one hand, the other being engaged in carrying a dram to his lips. His superb indifference gratified my artistic feeling more than it wounded my personal sensibilities. Anything really superior in its line claims my homage,

and this man was the ideal bar-tender, above all vulgar passions, untouched by commonplace sympathies, himself a lover of the liquid happiness he dispenses, and filled with a fine scorn of all those lesser felicities conferred by love or fame or wealth or any of the roundabout agencies for which his fiery elixir is the cheap, all-powerful substitute.

Dr. Wilson was in bed, though it was early in the evening, not having slept for I don't know how many nights.

"Take my card up to him, if you please."

"This way, Sir."

A man who has not slept for a fortnight or so is not expected to be as affable, when attacked in his bed, as a French Princess of old time at her morning receptions. Dr. Wilson turned toward me, as I entered, without effusion, but without rudeness. His thick, dark moustache was chopped off square at the lower edge of the upper lip, which implied a decisive, if not a peremptory, style of character.

I am Doctor So-and-So, of Hubtown, looking after my wounded son. (I gave my name and said *Boston*, of course, in reality.)

Dr. Wilson leaned on his elbow and looked up in my face, his features growing cordial. Then he put out his hand, and good-humoredly excused his reception of me. The day before, as he told me, he had dismissed from the service a medical man hailing from *****, Pennsylvania, bearing my last name, preceded by the same two initials; and he supposed, when my card came up, it was this individual who was disturbing his slumbers. The coincidence was so unlikely *a priori*, unless some forlorn parent without antecedents had named a child after me, that I could not help cross-questioning the Doctor, who assured me deliberately that the fact was just as he had said, even to the somewhat unusual initials. Dr. Wilson very kindly furnished me all the information in his power, gave me directions for telegraphing to Chambersburg, and showed every disposition to serve me.

On returning to the Herr House, we found the mild, white-haired old gentleman in a very happy state. He had just discovered his son, in a comfortable condition, at the United States Hotel. He thought that he could probably give

us some information which would prove interesting. To the United States Hotel we repaired, then, in company with our kind-hearted old friend, who evidently wanted to see me as happy as himself. He went up-stairs to his son's chamber, and presently came down to conduct us there.

Lieutenant P——, of the Pennsylvania ——th, was a very fresh, bright-looking young man, lying in bed from the effects of a recent injury received in action. A grape-shot, after passing through a post and a board, had struck him in the hip, bruising, but not penetrating or breaking. He had good news for me.

That very afternoon, a party of wounded officers had passed through Harrisburg, going East. He had conversed in the bar-room of this hotel with one of them, who was wounded about the shoulder, (it might be the lower part of the neck,) and had his arm in a sling. He belonged to the Twentieth Massachusetts; the Lieutenant saw that he was a Captain, by the two bars on his shoulder-strap. His name was my family-name; he was tall and youthful, like

my Captain. At four o'clock he left in the train for Philadelphia. Closely questioned, the Lieutenant's evidence was as round, complete, and lucid as a Japanese sphere of rock-crystal.

TE DEUM LAUDAMUS! The Lord's name be praised! The dead pain in the semilunar ganglion (which I must remind my reader is a kind of stupid, unreasoning brain, beneath the pit of the stomach, common to man and beast, which aches in the supreme moments of life, as when the dam loses her young ones, or the wild horse is lassoed) stopped short. There was a feeling as if I had slipped off a tight boot, or cut a strangling garter, — only it was all over my system. What more could I ask to assure me of the Captain's safety? As soon as the telegraph-office opens to-morrow morning we will send a message to our friends in Philadelphia, and get a reply, doubtless, which will settle the whole matter.

The hopeful morrow dawned at last, and the message was sent accordingly. In due time, the following reply was received: —

"Phil Sept 24 I think the report you have heard that W [the Captain] has gone East must be an error we have not seen or heard of him here M L H"

DE PROFUNDIS CLAMAVI! He *could* not have passed through Philadelphia without visiting the house called Beautiful, where he had been so tenderly cared for after his wound at Ball's Bluff, and where those whom he loved were lying in grave peril of life or limb. Yet he *did* pass through Harrisburg, going East, going to Philadelphia, on his way home. Ah, this is it! He *must* have taken the late night-train from Philadelphia for New York, in his impatience to reach home. There is such a train, not down in the guide-book, but we were assured of the fact at the Harrisburg depot. By and by came the reply from Dr. Wilson's telegraphic message: nothing had been heard of the Captain at Chambersburg. Still later, another message came from our Philadelphia friend, saying that he was seen on *Friday* last at the house of Mrs. K——, a well-known Union lady in Hagerstown. Now

this could not be true, for he did not leave Keedysville until *Saturday*; but the name of the lady furnished a clew by which we could probably track him. A telegram was at once sent to Mrs. K——, asking information. It was transmitted immediately, but when the answer would be received was uncertain, as the Government almost monopolized the line. I was, on the whole, so well satisfied that the Captain had gone East, that, unless something were heard to the contrary, I proposed following him in the late train leaving a little after midnight for Philadelphia.

This same morning we visited several of the temporary hospitals, churches and school-houses, where the wounded were lying. In one of these, after looking round as usual, I asked aloud, "Any Massachusetts men here?" Two bright faces lifted themselves from their pillows and welcomed me by name. The one nearest me was private John B. Noyes, of Company B, Massachusetts Thirteenth, son of my old college class-tutor, now the reverend and learned Professor of Hebrew, etc., in Harvard University.

His neighbor was Corporal Armstrong of the same Company. Both were slightly wounded, doing well. I learned then and since from Mr. Noyes that they and their comrades were completely overwhelmed by the attentions of the good people of Harrisburg, — that the ladies brought them fruits and flowers, and smiles, better than either, — and that the little boys of the place were almost fighting for the privilege of doing their errands. I am afraid there will be a good many hearts pierced in this war that will have no bullet-mark to show.

There were some heavy hours to get rid of, and we thought a visit to Camp Curtin might lighten some of them. A rickety wagon carried us to the camp, in company with a young woman from Troy, who had a basket of good things with her for a sick brother. "Poor boy! he will be sure to die," she said. The rustic sentries uncrossed their muskets and let us in. The camp was on a fair plain, girdled with hills, spacious, well kept apparently, but did not present any peculiar attraction for us. The visit would have been a dull one, had we not hap-

pened to get sight of a singular-looking set of human beings in the distance. They were clad in stuff of different hues, gray and brown being the leading shades, but both subdued by a neutral tint, such as is wont to harmonize the variegated apparel of travel-stained vagabonds. They looked slouchy, listless, torpid, — an ill-conditioned crew, at first sight, made up of such fellows as an old woman would drive away from her hen-roost with a broomstick. Yet these were estrays from the fiery army which has given our generals so much trouble, — "Secesh prisoners," as a bystander told us. A talk with them might be profitable and entertaining. But they were tabooed to the common visitor, and it was necessary to get inside of the line which separated us from them.

A solid, square captain was standing near by, to whom we were referred. Look a man calmly through the very centre of his pupils and ask him for anything with a tone implying entire conviction that he will grant it, and he will very commonly consent to the thing asked, were it to commit *hari-kari*. The Captain acceded to my

postulate, and accepted my friend as a corollary. As one string of my own ancestors was of Batavian origin, I may be permitted to say that my new friend was of the Dutch type, like the Amsterdam galiots, broad in the beam, capacious in the hold, and calculated to carry a heavy cargo rather than to make fast time. He must have been in politics at some time or other, for he made orations to all the "Secesh," in which he explained to them that the United States considered and treated them like children, and enforced upon them the ridiculous impossibility of the Rebels' attempting to do anything against such a power as that of the National Government.

Much as his discourse edified them and enlightened me, it interfered somewhat with my little plans of entering into frank and friendly talk with some of these poor fellows, for whom I could not help feeling a kind of human sympathy, though I am as venomous a hater of the Rebellion as one is like to find under the stars and stripes. It is fair to take a man prisoner. It is fair to make speeches to a man. But to

take a man prisoner and then make speeches to him while in durance is *not* fair.

I began a few pleasant conversations, which would have come to something but for the reason assigned.

One old fellow had a long beard, a drooping eyelid, and a black clay pipe in his mouth. He was a Scotchman from Ayr, *dour* enough, and little disposed to be communicative, though I tried him with the "Twa Briggs," and, like all Scotchmen, he was a reader of "Burns." He professed to feel no interest in the cause for which he was fighting, and was in the army, I judged, only from compulsion. There was a wild-haired, unsoaped boy, with pretty, foolish features enough, who looked as if he might be about seventeen, as he said he was. I give my questions and his answers literally.

"What State do you come from?"

"Georgy."

"What part of Georgia?"

"*Midway*."

— [How odd that is! My father was settled for seven years as pastor over the church at

Midway, Georgia, and this youth is very probably a grandson or great grandson of one of his parishioners.] —

"Where did you go to church when you were at home?"

"Never went inside 'f a church b't once in m' life."

"What did you do before you became a soldier?"

"Nothin'."

"What do you mean to do when you get back?"

"Nothin'."

Who could have any other feeling than pity for this poor human weed, this dwarfed and etiolated soul, doomed by neglect to an existence but one degree above that of the idiot?

With the group was a lieutenant, buttoned close in his gray coat, — one button gone, perhaps to make a breastpin for some fair traitorous bosom. A short, stocky man, undistinguishable from one of the "subject race" by any obvious meanderings of the *sangre azul* on his exposed surfaces. He did not say much, possibly because

he was convinced by the statements and arguments of the Dutch captain. He had on strong, iron-heeled shoes, of English make, which he said cost him seventeen dollars in Richmond.

I put the question, in a quiet, friendly way, to several of the prisoners, what they were fighting for. One answered, "For our homes." Two or three others said they did not know, and manifested great indifference to the whole matter, at which another of their number, a sturdy fellow, took offence, and muttered opinions strongly derogatory to those who would not stand up for the cause they had been fighting for. A feeble, attenuated old man, who wore the Rebel uniform, if such it could be called, stood by without showing any sign of intelligence. It was cutting very close to the bone to carve such a shred of humanity from the body politic to make a soldier of.

We were just leaving, when a face attracted me, and I stopped the party. "That is the true Southern type," I said to my companion. A young fellow, a little over twenty, rather tall, slight, with a perfectly smooth, boyish cheek,

delicate, somewhat high features, and a fine, almost feminine mouth, stood at the opening of his tent, and as we turned towards him fidgeted a little nervously with one hand at the loose canvas, while he seemed at the same time not unwilling to talk. He was from Mississippi, he said, had been at Georgetown College, and was so far imbued with letters that even the name of the literary humility before him was not new to his ears. Of course I found it easy to come into magnetic relation with him, and to ask him without incivility what *he* was fighting for. "Because I like the excitement of it," he answered. I know those fighters with women's mouths and boys' cheeks. One such from the circle of my own friends, sixteen years old, slipped away from his nursery, and dashed in under an assumed name among the red-legged Zouaves, in whose company he got an ornamental bullet-mark in one of the earliest conflicts of the war.

"Did you ever see a genuine Yankee?" said my Philadelphia friend to the young Mississippian.

"I have shot at a good many of them," he

replied, modestly, his woman's mouth stirring a little, with a pleasant, dangerous smile.

The Dutch captain here put his foot into the conversation, as his ancestors used to put theirs into the scale, when they were buying furs of the Indians by weight, — so much for the weight of a hand, so much for the weight of a foot. It deranged the balance of our intercourse; there was no use in throwing a fly where a paving-stone had just splashed into the water, and I nodded a good-by to the boy-fighter, thinking how much pleasanter it was for my friend the Captain to address him with unanswerable arguments and crushing statements in his own tent than it would be to meet him upon some remote picket station and offer his fair proportions to the quick eye of a youngster who would draw a bead on him before he had time to say *dunder and blixum*.

We drove back to the town. No message. After dinner still no message. Dr. Cuyler, Chief Army-Hospital Inspector, is in town, they say. Let us hunt him up, — perhaps he can help us.

We found him at the Jones House. A gentleman of large proportions, but of lively temperament, his frame knit in the North, I think, but ripened in Georgia, incisive, prompt, but good-humored, wearing his broad-brimmed, steeple-crowned felt hat with the least possible tilt on one side, — a sure sign of exuberant vitality in a mature and dignified person like him, — business-like in his ways, and not to be interrupted while occupied with another, but giving himself up heartily to the claimant who held him for the time. He was so genial, so cordial, so encouraging, that it seemed as if the clouds, which had been thick all the morning, broke away as we came into his presence, and the sunshine of his large nature filled the air all around us. He took the matter in hand at once, as if it were his own private affair. In ten minutes he had a second telegraphic message on its way to Mrs. K—— at Hagerstown, sent through the Government channel from the State Capitol, — one so direct and urgent that I should be sure of an answer to it, whatever became of the one I had sent in the morning.

While this was going on, we hired a dilapidated barouche, driven by an odd young native, neither boy nor man, "as a codling when 't is almost an apple," who said *wery* for very, simple and sincere, who smiled faintly at our pleasant-ries, always with a certain reserve of suspicion, and a gleam of the shrewdness that all men get who live in the atmosphere of horses. He drove us round by the Capitol grounds, white with tents, which were disgraced in my eyes by unsoldierly scrawls in huge letters, thus: THE SEVEN BLOOMSBURY BROTHERS, DEVIL'S HOLE, and similar inscriptions. Then to the Beacon Street of Harrisburg, which looks upon the Susquehanna instead of the Common, and shows a long front of handsome houses with fair gardens. The river is pretty nearly a mile across here, but very shallow now. The codling told us that a Rebel spy had been caught trying its fords a little while ago, and was now at Camp Curtin with a heavy ball chained to his leg, — a popular story, but a lie, Dr. Wilson said. A little farther along we came to the barkless stump of the tree to which Mr. Harris, the Cecrops of

the city named after him, was tied by the Indians for some unpleasant operation of scalping or roasting, when he was rescued by friendly savages, who paddled across the stream to save him. Our youngling pointed out a very respectable-looking stone house as having been "built by the Indians" about those times. Guides have queer notions occasionally.

I was at Niagara just when Dr. Rae arrived there with his companions and dogs and things from his Arctic search after the lost navigator.

"Who are those?" I said to my conductor.

"Them?" he answered. "Them's the men that's been out West, out to Michig'n, aft' *Sir Ben Franklin*."

Of the other sights of Harrisburg the Brant House or Hotel, or whatever it is called, seems most worth notice. Its *façade* is imposing, with a row of stately columns, high above which a broad sign impends, like a crag over the brow of a lofty precipice. The lower floor only appeared to be open to the public. Its tessellated pavement and ample courts suggested the idea of a

temple where great multitudes might kneel uncrowded at their devotions; but, from appearances about the place where the altar should be, I judged, that, if one asked the officiating priest for the cup which cheers and likewise inebriates, his prayer would not be unanswered. The edifice recalled to me a similar phenomenon I had once looked upon, — the famous Caffè Pedrocchi at Padua. It was the same thing in Italy and America: a rich man builds himself a mausoleum, and calls it a place of entertainment. The fragrance of innumerable libations and the smoke of incense-breathing cigars and pipes shall ascend day and night through the arches of his funeral monument. What are the poor dips which flare and flicker on the crowns of spikes that stand at the corners of St. Genevieve's filigree-cased sarcophagus to this perpetual offering of sacrifice?

Ten o'clock in the evening was approaching. The telegraph-office would presently close, and as yet there were no tidings from Hagerstown. Let us step over and see for ourselves. A message! A message!

*"Captain H still here leaves seven to-morrow
for Harrisburg Penna Is doing well*

Mrs H K——."

A note from Dr. Cuyler to the same effect came soon afterwards to the hotel.

We shall sleep well to-night ; but let us sit awhile with nubiferous, or, if we may coin a word, nepheligenous accompaniment, such as shall gently narcotize the over-wearied brain and fold its convolutions for slumber like the leaves of a lily at nightfall. For now the over-tense nerves are all unstraining themselves, and a buzz, like that which comes over one who stops after being long jolted upon an uneasy pavement, makes the whole frame alive with a luxurious languid sense of all its inmost fibres. Our cheerfulness ran over, and the mild, pensive clerk was so magnetized by it that he came and sat down with us. He presently confided to me, with infinite *naïveté* and ingenuousness, that, judging from my personal appearance, he should not have thought me the writer that he in his generosity reckoned me to be. His con-

ception, so far as I could reach it, involved a huge, uplifted forehead, embossed with protuberant organs of the intellectual faculties, such as all writers are supposed to possess in abounding measure. While I fell short of his ideal in this respect, he was pleased to say that he found me by no means the remote and inaccessible personage he had imagined, and that I had nothing of the dandy about me, which last compliment I had a modest consciousness of most abundantly deserving.

Sweet slumbers brought us to the morning of Thursday. The train from Hagerstown was due at 11.15 A. M. We took another ride behind the codling, who showed us the sights of yesterday over again. Being in a gracious mood of mind, I enlarged on the varying aspects of the town-pumps and other striking objects which we had once inspected, as seen by the different lights of evening and morning. After this, we visited the school-house hospital. A fine young fellow, whose arm had been shattered, was just falling into the spasms of lock-jaw. The beads of sweat stood large and

round on his flushed and contracted features. He was under the effect of opiates, — why not (if his case was desperate, as it seemed to be considered) stop his sufferings with chloroform? It was suggested that it might *shorten life*. "What then?" I said. "Are a dozen additional spasms worth living for?"

The time approached for the train to arrive from Hagerstown, and we went to the station. I was struck, while waiting there, with what seemed to me a great want of care for the safety of the people standing round. Just after my companion and myself had stepped off the track, I noticed a car coming quietly along at a walk, as one may say, without engine, without visible conductor, without any person heralding its approach, so silently, so insidiously, that I could not help thinking how very near it came to flattening out me and my match-box worse than the Ravel pantomimist and his snuff-box were flattened out in the play. The train was late, — fifteen minutes, half an hour late, — and I began to get nervous, lest something had happened. While I was looking for it, out started

a freight-train, as if on purpose to meet the cars I was expecting, for a grand smash-up. I shivered at the thought, and asked an *employé* of the road, with whom I had formed an acquaintance a few minutes old, why there should not be a collision of the expected train with this which was just going out. He smiled an official smile, and answered that they arranged to prevent that, or words to that effect.

Twenty-four hours had not passed from that moment when a collision *did* occur, just out of the city, where I feared it, by which at least eleven persons were killed, and from forty to sixty more were maimed and crippled!

To-day there was the delay spoken of, but nothing worse. The expected train came in so quietly that I was almost startled to see it on the track. Let us walk calmly through the cars, and look around us.

In the first car, on the fourth seat to the right, I saw my Captain; there saw I him, even my first-born, whom I had sought through many cities.

"How are you, Boy?"

"How are you, Dad?"

Such are the proprieties of life, as they are observed among us Anglo-Saxons of the nineteenth century, decently disguising those natural impulses that made Joseph, the Prime-Minister of Egypt, weep aloud so that the Egyptians and the house of Pharaoh heard,—nay, which had once overcome his shaggy old uncle Esau so entirely that he fell on his brother's neck and cried like a baby in the presence of all the women. But the hidden cisterns of the soul may be filling fast with sweet tears, while the windows through which it looks are undimmed by a drop or a film of moisture.

These are times in which we cannot live solely for selfish joys or griefs. I had not let fall the hand I held, when a sad, calm voice addressed me by name. I fear that at the moment I was too much absorbed in my own feelings; for certainly at any other time I should have yielded myself without stint to the sympathy which this meeting might well call forth.

"You remember my son, Cortland Saunders, whom I brought to see you once in Boston?"

"I do remember him well."

"He was killed on Monday, at Shepherds-town. I am carrying his body back with me on this train. He was my only child. If you could come to my house, — I can hardly call it my home now, — it would be a pleasure to me."

This young man, belonging in Philadelphia, was the author of a "New System of Latin Paradigms," a work showing extraordinary scholarship and capacity. It was this book which first made me acquainted with him, and I kept him in my memory, for there was genius in the youth. Some time afterwards he came to me with a modest request to be introduced to President Felton, and one or two others, who would aid him in a course of independent study he was proposing to himself. I was most happy to smooth the way for him, and he came repeatedly after this to see me and express his satisfaction in the opportunities for study he enjoyed at Cambridge. He was a dark, still, slender person, always with a trance-like remoteness, a

mystic dreaminess of manner, such as I never saw in any other youth. Whether he heard with difficulty, or whether his mind reacted slowly on an alien thought, I could not say; but his answer would often be behind time, and then a vague, sweet smile, or a few words spoken under his breath, as if he had been trained in sick men's chambers. For such a young man, seemingly destined for the inner life of contemplation, to be a soldier seemed almost unnatural. Yet he spoke to me of his intention to offer himself to his country, and his blood must now be reckoned among the precious sacrifices which will make her soil sacred forever. Had he lived, I doubt not that he would have redeemed the rare promise of his earlier years. He has done better, for he has died that unborn generations may attain the hopes held out to our nation and to mankind.

So, then, I had been within ten miles of the place where my wounded soldier was lying, and then calmly turned my back upon him to come once more round by a journey of three or four hundred miles to the same region I had left!

No mysterious attraction warned me that the heart warm with the same blood as mine was throbbing so near my own. I thought of that lovely, tender passage where Gabriel glides unconsciously by Evangeline upon the great river. Ah, me! if that railroad-crash had been a few hours earlier, we two should never have met again, after coming so close to each other!

The source of my repeated disappointments was soon made clear enough. The Captain had gone to Hagerstown, intending to take the cars at once for Philadelphia, as his three friends actually did, and as I took it for granted he certainly would. But as he walked languidly along, some ladies saw him across the street, and seeing, were moved with pity, and pitying, spoke such soft words that he was tempted to accept their invitation and rest awhile beneath their hospitable roof. The mansion was old, as the dwellings of gentlefolks should be; the ladies were some of them young, and all were full of kindness; there were gentle cares, and unasked luxuries, and pleasant talk, and music-sprinklings from the piano, with a sweet voice

to keep them company, — and all this after the swamps of the Chickahominy, the mud and flies of Harrison's Landing, the dragging marches, the desperate battles, the fretting wound, the jolting ambulance, the log-house, and the rickety milk-cart! Thanks, uncounted thanks to the angelic ladies whose charming attentions detained him from Saturday to Thursday, to his great advantage and my infinite bewilderment! As for his wound, how could it do otherwise than well under such hands? The bullet had gone smoothly through, dodging everything but a few nervous branches, which would come right in time and leave him as well as ever.

At ten that evening we were in Philadelphia, the Captain at the house of the friends so often referred to, and I the guest of Charley, my kind companion. The Quaker element gives an irresistible attraction to these benignant Philadelphia households. Many things reminded me that I was no longer in the land of the Pilgrims. On the table were *Kool Slaa* and *Schmeer Kase*, but the good grandmother who dispensed with such quiet, simple grace

these and more familiar delicacies was literally ignorant of *Baked Beans*, and asked if it was the Lima bean which was employed in that marvellous dish of animalized leguminous farina!

Charley was pleased with my comparing the face of the small Ethiop known to his household as "Tines" to a huckleberry with features. He also approved my parallel between a certain German blonde young maiden whom we passed in the street and the "Morris White" peach. But he was so good-humored at times, that, if one scratched a lucifer, he accepted it as an illumination.

A day in Philadelphia left a very agreeable impression of the outside of that great city, which has endeared itself so much of late to all the country by its most noble and generous care of our soldiers. Measured by its sovereign hotel, the Continental, it would stand at the head of our economic civilization. It provides for the comforts and conveniences, and many of the elegances of life, more satisfactorily than any American city, perhaps than any other city anywhere. Many of its char-

acteristics are accounted for to some extent by its geographical position. It is the great neutral centre of the Continent, where the fiery enthusiasms of the South and the keen fanaticisms of the North meet at their outer limits, and result in a compound which neither turns litmus red nor turmeric brown. It lives largely on its traditions, of which, leaving out Franklin and Independence Hall, the most imposing must be considered its famous water-works. In my younger days I visited Fairmount, and it was with a pious reverence that I renewed my pilgrimage to that perennial fountain. Its watery ventricles were throbbing with the same systole and diastole as when, the blood of twenty years bounding in my own heart, I looked upon their giant mechanism. But in the place of "Pratt's Garden" was an open park, and the old house where Robert Morris held his court in a former generation was changing to a public restaurant. A suspension-bridge cobwebbed itself across the Schuylkill where that audacious arch used to leap the river at a single bound,—an arch

of greater span, as they loved to tell us, than was ever before constructed. The Upper Ferry Bridge was to the Schuylkill what the Colossus was to the harbor of Rhodes. It had an air of dash about it which went far towards redeeming the dead level of respectable average which flattens the physiognomy of the rectangular city. Philadelphia will never be herself again until another Robert Mills and another Lewis Wernwag have shaped her a new palladium. She must leap the Schuylkill again, or old men will sadly shake their heads, like the Jews at the sight of the second temple, remembering the glories of that which it replaced.

There are times when Ethiopian minstrelsy can amuse, if it does not charm, a weary soul, and such a vacant hour there was on this same Friday evening. The "opera-house" was spacious and admirably ventilated. As I was listening to the merriment of the sooty buffoons, I happened to cast my eyes up to the ceiling, and through an open semicircular window a bright solitary star looked me calmly

in the eyes. It was a strange intrusion of the vast eternities beckoning from the infinite spaces. I called the attention of one of my neighbors to it, but "Bones" was irresistibly droll, and Arcturus, or Aldebaran, or whatever the blazing luminary may have been, with all his revolving worlds, sailed uncared-for down the firmament.

On Saturday morning we took up our line of march for New York. Mr. Felton, President of the Philadelphia, Wilmington and Baltimore Railroad, had already called upon me, with a benevolent and sagacious look on his face which implied that he knew how to do me a service and meant to do it. Sure enough, when we got to the depot, we found a couch spread for the Captain, and both of us were passed on to New York with no visits, but those of civility, from the conductor. The best thing I saw on the route was a *rustic fence*, near Elizabethtown, I think, but I am not quite sure. There was more genius in it than in any structure of the kind I have ever seen, — each length being of a special pattern,

ramified, reticulated, contorted, as the limbs of the trees had grown. I trust some friend will photograph or stereograph this fence for me, to go with the view of the spires of Frederick already referred to, as mementos of my journey.

I had come to feeling that I knew most of the respectably dressed people whom I met in the cars, and had been in contact with them at some time or other. Three or four ladies and gentlemen were near us, forming a group by themselves. Presently one addressed me by name, and, on inquiry, I found him to be the gentleman who was with me in the pulpit as Orator on the occasion of another Phi Beta Kappa poem, one delivered at New Haven. The party were very courteous and friendly, and contributed in various ways to our comfort.

It sometimes seems to me as if there were only about a thousand people in the world, who keep going round and round behind the scenes and then before them, like the "army" in a beggarly stage-show. Suppose that I should

really wish, some time or other, to get away from this everlasting circle of revolving supernumeraries, where should I buy a ticket the like of which was not in some of their pockets, or find a seat to which some one of them was not a neighbor?

A little less than a year before, after the Ball's-Bluff accident, the Captain, then the Lieutenant, and myself had reposed for a night on our homeward journey at the Fifth-Avenue Hotel, where we were lodged on the ground-floor, and fared sumptuously. We were not so peculiarly fortunate this time, the house being really very full. Farther from the flowers and nearer to the stars,—to reach the neighborhood of which last the *per ardua* of three or four flights of stairs was formidable for any mortal, wounded or well. The "vertical railway" settled that for us, however. It is a giant corkscrew forever pulling a mammoth cork, which, by some divine judgment, is no sooner drawn than it is replaced in its position. This ascending and descending stopper is hollow, carpeted, with cushioned seats, and is

watched over by two condemned souls, called conductors, one of whom is said to be named Ixion, and the other Sisyphus.

I love New York, because, as in Paris, everybody that lives in it feels that it is his property, — at least, as much as it is anybody's. My Broadway, in particular, I love almost as I used to love my Boulevards. I went, therefore, with peculiar interest, on the day that we rested at our grand hotel, to visit some new pleasure-grounds the citizens had been arranging for us, and which I had not yet seen. The Central Park is an expanse of wild country, well crumpled so as to form ridges which will give views and hollows that will hold water. The hips and elbows and other bones of Nature stick out here and there in the shape of rocks which give character to the scenery, and an unchangeable, unpurchasable look to a landscape that without them would have been in danger of being fattened by art and money out of all its native features. The roads were fine, the sheets of water beautiful, the bridges handsome, the swans elegant in

their deportment, the grass green and as short as a fast horse's winter coat. I could not learn whether it was kept so by clipping or singeing. I was delighted with my new property, — but it cost me four dollars to get there, so far was it beyond the Pillars of Hercules of the fashionable quarter. What it will be by and by depends on circumstances ; but at present it is as much central to New York as Brookline is central to Boston. The question is not between Mr. Olmsted's admirably arranged, but remote pleasure-ground and our Common, with its batrachian pool, but between his *Excentric* Park and our finest suburban scenery, between its artificial reservoirs and the broad natural sheet of Jamaica Pond. I say this not invidiously, but in justice to the beauties which surround our own metropolis. To compare the situations of any dwellings in either of the great cities with those which look upon the Common, the Public Garden, the waters of the Back Bay, would be to take an unfair advantage of Fifth Avenue and Walnut Street. St. Botolph's daughter dresses in

plainer clothes than her more stately sisters, but she wears an emerald on her right hand and a diamond on her left that Cybele herself need not be ashamed of.

On Monday morning, the twenty-ninth of September, we took the cars for *home*. Vacant lots, with Irish and pigs; vegetable-gardens; straggling houses; the high bridge; villages, not enchanting; then Stamford; then NORWALK. Here, on the sixth of May, 1853, I passed close on the heels of the great disaster. But that my lids were heavy on that morning, my readers would probably have had no further trouble with me. Two of my friends saw the car in which they rode break in the middle and leave them hanging over the abyss. From Norwalk to Boston, that day's journey of two hundred miles was a long funeral-procession.

Bridgeport, waiting for Iranistan to rise from its ashes with all its phœnix-egg domes, — bubbles of wealth that broke, ready to be blown again, iridescent as ever, which is pleasant, for the world likes cheerful Mr. Barnum's

success ; New Haven, girt with flat marshes that look like monstrous billiard-tables, with hay-cocks lying about for balls, — romantic with West Rock and its legends, — cursed with a detestable depot, whose niggardly arrangements crowd the track so murderously close to the wall that the *peine forte et dure* must be the frequent penalty of an innocent walk on its platform, — with its neat carriages, metropolitan hotels, precious old college-dormitories, its vistas of elms and its dishevelled weeping-willows ; Hartford, substantial, well-bridged, many-steepled city, — every conical spire an extinguisher of some nineteenth-century heresy ; so onward, by and across the broad, shallow Connecticut, — dull red road and dark river woven in like warp and woof by the shuttle of the darting engine ; then Springfield, the wide-meadowed, well-feeding, horse-loving, hot-summered, giant-treed town, — city among villages, village among cities ; Worcester, with its Dædalian labyrinth of crossing railroad-bars, where the snorting Minotaurs, breathing fire and smoke

and hot vapors, are stabled in their dens ; Framingham, fair cup-bearer, leaf-cinctured Hebe of the deep-bosomed Queen sitting by the sea-side on the throne of the Six Nations. And now I begin to know the road, not by towns, but by single dwellings ; not by miles, but by rods. The poles of the great magnet that draws in all the iron tracks through the grooves of all the mountains must be near at hand, for here are crossings, and sudden stops, and screams of alarmed engines heard all around. The tall granite obelisk comes into view far away on the left, its bevelled capstone sharp against the sky ; the lofty chimneys of Charlestown and East Cambridge flaunt their smoky banners up in the thin air ; and now one fair bosom of the three-hilled city, with its dome-crowned summit, reveals itself, as when many-breasted Ephesian Artemis appeared with half-open *chlamys* before her worshippers.

Fling open the window-blinds of the chamber that looks out on the waters and towards the western sun ! Let the joyous light shine

in upon the pictures that hang upon its walls and the shelves thick-set with the names of poets and philosophers and sacred teachers, in whose pages our boys learn that life is noble only when it is held cheap by the side of honor and of duty. Lay him in his own bed, and let him sleep off his aches and weariness. So comes down another night over this household, unbroken by any messenger of evil tidings, — a night of peaceful rest and grateful thoughts ; for this our son and brother was dead and is alive again, and was lost and is found.

THE STEREOSCOPE AND THE STEREOGRAPH.

DEMOCRITUS of Abdera, commonly known as the Laughing Philosopher, probably because he did not consider the study of truth inconsistent with a cheerful countenance, believed and taught that all bodies were continually throwing off certain images like themselves, which subtile emanations, striking on our bodily organs, gave rise to our sensations. Epicurus borrowed the idea from him, and incorporated it into the famous system, of which Lucretius has given us the most popular version. Those who are curious on the matter will find the poet's description at the beginning of his fourth book. Forms, effigies, membranes, or *films*, are the nearest representatives of the terms applied to these effluences. They are

perpetually shed from the surfaces of solids, as bark is shed by trees. *Cortex* is, indeed, one of the names applied to them by Lucretius.

These evanescent films may be seen in one of their aspects in any clear, calm sheet of water, in a mirror, in the eye of an animal by one who looks at it in front, but better still by the consciousness behind the eye in the ordinary act of vision. They must be packed like the leaves of a closed book ; for suppose a mirror to give an image of an object a mile off, it will give one at every point less than a mile, though this were subdivided into a million parts. Yet the images will not be the same ; for the one taken a mile off will be very small, at half a mile as large again, at a hundred feet, fifty times as large, and so on, as long as the mirror can contain the image. ,

Under the action of light, then, a body makes its superficial aspect potentially present at a distance, becoming appreciable as a shadow or as a picture. But remove the cause, — the body itself, — and the effect is removed. The man beholdeth himself in the glass, and goeth his

way, and straightway both the mirror and the mirrored forget what manner of man he was. These visible films or membranous *exuviae* of objects, which the old philosophers talked about, have no real existence, separable from their illuminated source, and perish instantly when it is withdrawn.

If a man had handed a metallic speculum to Democritus of Abdera, and told him to look at his face in it while his heart was beating thirty or forty times, promising that one of the films his face was shedding should stick there, so that neither he, nor it, nor anybody should forget what manner of man he was, the Laughing Philosopher would probably have vindicated his claim to his title by an explosion that would have astonished the speaker.

This is just what the Daguerrotype has done. It has fixed the most fleeting of our illusions, that which the apostle and the philosopher and the poet have alike used as the type of instability and unreality. The photograph has completed the triumph, by making a sheet of paper reflect images like a mirror and hold them as a picture.

This triumph of human ingenuity is the most audacious, remote, improbable, incredible, — the one that would seem least likely to be regained, if all traces of it were lost, of all the discoveries man has made. It has become such an everyday matter with us, that we forget its miraculous nature, as we forget that of the sun itself, to which we owe the creations of our new art. Yet in all the prophecies of dreaming enthusiasts, in all the random guesses of the future conquests over matter, we do not remember any prediction of such an inconceivable wonder, as our neighbor round the corner, or the proprietor of the small house on wheels, standing on the village common, will furnish any of us for the most painfully slender remuneration. No Century of Inventions includes this among its possibilities. Nothing but the vision of a Laputan, who passed his days in extracting sunbeams out of cucumbers, could have reached such a height of delirium as to rave about the time when a man should paint his miniature by looking at a blank tablet, and a multitudinous wilderness of forest foliage or an endless Babel of roofs and spires

stamp itself, in a moment, so faithfully and so minutely, that one may creep over the surface of the picture with his microscope and find every leaf perfect, or read the letters of distant signs, and see what was the play at the “Variétés” or the “Victoria” on the evening of the day when it was taken, just as he would sweep the real view with a spy-glass to explore all that it contains.

Some years ago, we sent a page or two to one of the magazines, — the “Knickerbocker,” if we remember aright, — in which the story was told from the “Arabian Nights,” of the three kings’ sons, who each wished to obtain the hand of a lovely princess, and received for answer, that he who brought home the most wonderful object should obtain the lady’s hand as his reward. Our readers, doubtless, remember the original tale, with the flying carpet, the tube which showed what a distant friend was doing by looking into it, and the apple which gave relief to the most desperate sufferings only by inhalation of its fragrance. The railroad-car, the telegraph, and the apple-flavored chlo-

reform, could and do realize, every day, — as was stated in the passage referred to, with a certain rhetorical amplitude not doubtfully suggestive of the lecture-room, — all that was fabled to have been done by the carpet, the tube, and the fruit of the Arabian story.

All these inventions force themselves upon us to the full extent of their significance. It is therefore hardly necessary to waste any considerable amount of rhetoric upon wonders that are so thoroughly appreciated. When human art says to each one of us, I will give you ears that can hear a whisper in New Orleans, and legs that can walk six hundred miles in a day, and if, in consequence of any defect of rail or carriage, you should be so injured that your own very insignificant walking members must be taken off, I can make the surgeon's visit a pleasant dream for you, on awaking from which you will ask when he is coming to do that which he has done already, — what is the use of poetical or rhetorical amplification? But this other invention of *the mirror with a memory*, and especially that application of it which has

given us the wonders of the stereoscope, is not so easily, completely, universally recognized in all the immensity of its applications and suggestions. The stereoscope, and the pictures it gives, are, however, common enough to be in the hands of many of our readers ; and as many of those who are not acquainted with it must before long become as familiar with it as they are now with friction-matches, we feel sure that a few pages relating to it will not be unacceptable.

Our readers may like to know the outlines of the process of making daguerrotypes and photographs, as just furnished us by Mr. Whipple, one of the most successful operators in this country. We omit many of those details which are everything to the practical artist, but nothing to the general reader. We must premise, that certain substances undergo chemical alterations, when exposed to the light, which produce a change of color. Some of the compounds of silver possess this faculty to a remarkable degree, — as the common indelible marking-ink (a solution of nitrate of silver), which soon

darkens in the light, shows us every day. This is only one of the innumerable illustrations of the varied effects of light on color. A living plant owes its brilliant hues to the sunshine; but a dead one, or the tints extracted from it, will fade in the same rays which clothe the tulip in crimson and gold, — as our lady-readers who have rich curtains in their drawing-rooms know full well. The sun, then, is a master of *chiaroscuro*, and, if he has a living petal for his pallet, is the first of colorists. Let us walk into his studio, and examine some of his painting machinery.

1. THE DAGUERROTYPE. — A silver-plated sheet of copper is resilvered by electro-plating, and perfectly polished. It is then exposed in a glass box to the vapor of iodine until its surface turns to a golden yellow. Then it is exposed in another box to the fumes of the bromide of lime until it becomes of a blood-red tint. Then it is exposed once more, for a few seconds, to the vapor of iodine. The plate is now sensitive to light, and is of course kept from it, until,

having been placed in the darkened camera, the screen is withdrawn and the camera-picture falls upon it. In strong light, and with the best instruments, *three seconds'* exposure is enough, — but the time varies with circumstances. The plate is now withdrawn and exposed to the vapor of mercury at 212° . Where the daylight was strongest, the sensitive coating of the plate has undergone such a chemical change, that the mercury penetrates readily to the silver, producing a minute white granular deposit upon it, like a very thin fall of snow, drifted by the wind. The strong lights are little heaps of these granules, the middle lights thinner sheets of them; the shades are formed by the dark silver itself, thinly sprinkled only, as the earth shows, with a few scattered snow-flakes on its surface. The precise chemical nature of these granules we care less for than their palpable presence, which may be perfectly made out by a microscope magnifying fifty diameters, or even less.

The picture thus formed would soon fade under the action of light, in consequence of

further changes in the chemical elements of the film of which it consists. Some of these elements are therefore removed by washing it with a solution of hyposulphite of soda, after which it is rinsed with pure water. It is now permanent in the light, but a touch wipes off the picture as it does the bloom from a plum. To fix it, a solution of hyposulphite of soda containing chloride of gold is poured on the plate, while this is held over a spirit-lamp. It is then again rinsed with pure water, and is ready for its frame.

2. THE PHOTOGRAPH. — Just as we must have a mould before we can make a cast, we must get a *negative* or reversed picture on glass before we can get our positive or natural picture. The first thing, then, is to lay a sensitive coating on a piece of glass, — crown-glass, which has a natural surface, being preferable to plate-glass. *Collodion*, which is a solution of gun-cotton in alcohol and ether, mingled with a solution of iodide and bromide of potassium, is used to form a thin coating over the

glass. Before the plate is dry, it is dipped into a solution of nitrate of silver, where it remains from one to three or four minutes. Here, then, we have essentially the same chemical elements that we have seen employed in the daguerrotype, — namely, iodine, bromine, and silver; and by their mutual reactions in the last process we have formed the sensitive iodide and bromide of silver. The glass is now placed, still wet, in the camera, and there remains from three seconds to one or two minutes, according to circumstances. It is then washed with a solution of sulphate of iron. Every light spot in the camera-picture becomes dark on the sensitive coating of the glass-plate. But where the shadows or dark parts of the camera-picture fall, the sensitive coating is less darkened, or not at all, if the shadows are very deep, and so these shadows of the camera-picture become the lights of the glass-picture, as the lights become the shadows. Again, the picture is reversed, just as in every camera-obscura where the image is received on a screen direct from the lens. Thus the glass plate has the right part of the object

on the left side of its picture, and the left part on its right side ; its light is darkness, and its darkness is light. Everything is just as wrong as it can be, except that the relations of each wrong to the other wrongs are like the relations of the corresponding rights to each other in the original natural image. This is a *negative* picture.

Extremes meet. Every given point of the picture is as far from truth as a lie can be. But in travelling away from the pattern it has gone round a complete circle, and is at once as remote from Nature and as near it as possible. — “How far is it to Taunton?” said a countryman, who was walking exactly the wrong way to reach that commercial and piscatory centre. — “’Bäout twenty-five thäöusan’ mild,” — said the boy he asked, — “’f y’ go ’z y’ ’r’ goin’ näow, ’n’ ’bäout häaf a mild ’f y’ turn right räoun’ ’n’ go t’ other way.”

The negative picture being formed, it is washed with a solution of hyposulphite of soda, to remove the soluble principles which are liable to decomposition, and then coated with shellac varnish to protect it.

This *negative* is now to give birth to a *positive*, — this mass of contradictions to assert its hidden truth in a perfect harmonious affirmation of the realities of Nature. Behold the process !

A sheet of the best linen paper is dipped in salt water and suffered to dry. Then a solution of nitrate of silver is poured over it and it is dried in a dark place. This paper is now sensitive ; it has a conscience, and is afraid of daylight. Press it against the glass negative and lay them in the sun, the glass uppermost, leaving them so for from three to ten minutes. The paper, having the picture formed on it, is then washed with the solution of hyposulphite of soda, rinsed in pure water, soaked again in a solution of hyposulphite of soda, to which, however, the chloride of gold has been added, and again rinsed. It is then sized or varnished.

Out of the perverse and totally depraved negative, — where it might almost seem as if some magic and diabolic power had wrenched all things from their proprieties, where the light of the eye was darkness, and the deepest blackness was gilded with the brightest glare, — is to come

the true end of all this series of operations, a copy of Nature in all her sweet gradations and harmonies and contrasts.

We owe the suggestion to a great wit, who overflowed our small intellectual home-lot with a rushing freshet of fertilizing talk the other day, — one of our friends, who quarries thought on his own premises, but does not care to build his blocks into books and essays, — that perhaps this world is only the *negative* of that better one in which lights will be turned to shadows and shadows into light, but all harmonized, so that we shall see why these ugly patches, these misplaced gleams and blots, were wrought into the temporary arrangements of our planetary life.

For, lo! when the sensitive paper is laid in the sun under the negative glass, every dark spot on the glass arrests a sunbeam, and so the spot of the paper lying beneath remains unchanged; but every light space of the negative lets the sunlight through, and the sensitive paper beneath confesses its weakness, and betrays it by growing dark just in proportion to the glare that strikes upon it. So, too, we have

only to turn the glass before laying it on the paper, and we bring all the natural relations of the object delineated back again, — its right to the right of the picture, its left to the picture's left.

On examining the glass negative by transmitted light with a power of a hundred diameters, we observe minute granules, whether crystalline or not we cannot say, very similar to those described in the account of the daguerrotype. But now their effect is reversed. Being opaque, they darken the glass wherever they are accumulated, just as the snow darkens our skylights. Where these particles are drifted, therefore, we have our shadows, and where they are thinly scattered, our lights. On examining the paper photographs, we have found no distinct granules, but diffused stains of deeper or lighter shades.

Such is the sun-picture, in the form in which we now most commonly meet it, — for the daguerrotype, perfect and cheap as it is, and admirably adapted for miniatures, has almost disappeared from the field of landscape, still life,

architecture, and *genre* painting, to make room for the photograph. Mr. Whipple tells us that even now he takes a much greater number of miniature portraits on metal than on paper ; and yet, except occasionally a statue, it is rare to see anything besides a portrait shown in a daguerrotype. But the greatest number of sun-pictures we see are the photographs which are intended to be looked at with the aid of the instrument we are next to describe, and to the stimulus of which the recent vast extension of photographic copies of Nature and Art is mainly owing.

3. THE STEREOSCOPE. — This instrument was invented by Professor Wheatstone, and first described by him in 1838. It was only a year after this that M. Daguerre made known his discovery in Paris ; and almost at the same time Mr. Fox Talbot sent his communication to the Royal Society, giving an account of his method of obtaining pictures on paper by the action of light. Iodine was discovered in 1811, bromine in 1826, chloroform in 1831, gun-cotton, from which collodion is made, in 1846, the electro-

plating process about the same time with photography ; “ all things, great and small, working together to produce what seemed at first as delightful, but as fabulous, as Aladdin’s ring, which is now as little suggestive of surprise as our daily bread.”

A stereoscope is an instrument which makes surfaces look solid. All pictures in which perspective and light and shade are properly managed, have more or less of the effect of solidity ; but by this instrument that effect is so heightened as to produce an appearance of reality which cheats the senses with its seeming truth.

There is good reason to believe that the appreciation of solidity by the eye is purely a matter of education. The famous case of a young man who underwent the operation of couching for cataract, related by Cheselden, and a similar one reported in the Appendix to Müller’s Physiology, go to prove that everything is seen only as a superficial extension, until the other senses have taught the eye to recognize *depth*, or the third dimension, which gives solidity, by converging outlines, distribution of light and shade,

change of size and of the texture of surfaces. Cheselden's patient thought "all objects whatever touched his eyes, as what he felt did his skin." The patient whose case is reported by Müller could not tell the form of a cube held obliquely before his eye from that of a flat piece of pasteboard presenting the same outline. Each of these patients saw only with one eye, — the other being destroyed, in one case, and not restored to sight until long after the first, in the other case. In two months' time Cheselden's patient had learned to know solids; in fact, he argued so logically from light and shade and perspective, that he felt of pictures, expecting to find reliefs and depressions, and was surprised to discover that they were flat surfaces. If these patients had suddenly recovered the sight of *both* eyes, they would probably have learned to recognize solids more easily and speedily.

We can commonly tell whether an object is solid, readily enough with one eye, but still better with two eyes, and sometimes *only* by using both. If we look at a square piece of

ivory with one eye alone, we cannot tell whether it is a scale of veneer, or the side of a cube, or the base of a pyramid, or the end of a prism. But if we now open the other eye, we shall see one or more of its sides, if it have any, and then know it to be a solid, and what kind of a solid.

We see something with the second eye, which we did not see with the first; in other words, the two eyes see different pictures of the same thing, for the obvious reason that they look from points two or three inches apart. By means of these two different views of an object, the mind, as it were, *feels round it* and gets an idea of its solidity. We clasp an object with our eyes, as with our arms, or with our hands, or with our thumb and finger, and then we know it to be something more than a surface. This, of course, is an illustration of the fact, rather than an explanation of its mechanism.

Though, as we have seen, the two eyes look on two different pictures, we perceive but one picture. The two have run together and become blended in a third, which shows us everything we see in each. But, in order

that they should so run together, both the eye and the brain must be in a natural state. Push one eye a little inward with the forefinger, and the image is doubled, or at least confused. Only certain parts of the two retinæ work harmoniously together, and you have disturbed their natural relations. Again, take two or three glasses more than temperance permits, and you see double; the eyes are right enough, probably, but the brain is in trouble, and does not report their telegraphic messages correctly. These exceptions illustrate the every-day truth, that, when we are in right condition, our two eyes see two somewhat different pictures, which our perception combines to form one picture, representing objects in all their dimensions, and not merely as surfaces.

Now, if we can get two artificial pictures of any given object, one as we should see it with the right eye, the other as we should see it with the left eye, and then, looking at the right picture, and that only, with the right eye, and at the left picture, and that

only, with the left eye, contrive some way of making these pictures run together as we have seen our two views of a natural object do, we shall get the sense of solidity that natural objects give us. The arrangement which effects it will be a *stereoscope*, according to our definition of that instrument. How shall we attain these two ends?

1. An artist can draw an object as he sees it, looking at it only with his right eye. Then he can draw a second view of the same object as he sees it with his left eye. It will not be hard to draw a cube or an octahedron in this way; indeed, the first stereoscopic figures were pairs of outlines, right and left, of solid bodies thus drawn. But the minute details of a portrait, a group, or a landscape, all so nearly alike to the two eyes, yet not identical in each picture of our natural double view, would defy any human skill to reproduce them exactly. And just here comes in the photograph to meet the difficulty. A first picture of an object is taken; then the instrument is moved a couple of

inches or a little more, the distance between the human eyes, and a second picture is taken. Better than this, two pictures are taken at once in a double camera.

We were just now stereographed, ourselves, at a moment's warning, as if we were fugitives from justice. A skeleton shape, of about a man's height, its head covered with a black veil, glided across the floor, faced us, lifted its veil, and took a preliminary look. When we had grown sufficiently rigid in our attitude of studied ease, and got our umbrella into a position of thoughtful carelessness, and put our features with much effort into an unconstrained aspect of cheerfulness tempered with dignity, of manly firmness blended with womanly sensibility, of courtesy, as much as to imply, "You honor me, Sir," toned or sized, as one may say, with something of the self-assertion of a human soul which reflects proudly, "I am superior to all this," — when, I say, we were all right, the spectral Mokanna dropped his long veil, and his waiting-slave put a sensitive tablet under its folds. The

veil was then again lifted, and the two great glassy eyes stared at us once more for some thirty seconds. The veil then dropped again; but in the mean time the shrouded sorcerer had stolen our double image; we were immortal. Posterity might thenceforth inspect us (if not otherwise engaged), not as a surface only, but in all our dimensions as an undisputed *solid* man of Boston.

2. We have now obtained the double-eyed or twin pictures, or STEREOGRAPH, if we may coin a name. But the pictures are two, and we want to slide them into each other, so to speak, as in natural vision, that we may see them as one. How shall we make one picture out of two, the corresponding parts of which are separated by a distance of two or three inches?

We can do this in two ways. First, by *squinting* as we look at them. But this is tedious, painful, and to some impossible, or at least very difficult. We shall find it much easier to look through a couple of glasses that *squint for us*. If at the same time they mag-

nify the two pictures, we gain just so much in the distinctness of the picture, which, if the figures on the slide are small, is a great advantage. One of the easiest ways of accomplishing this double purpose is to cut a convex lens through the middle, grind the curves of the two halves down to straight lines, and join them by their thin edges. This is a *squinting magnifier*; and if arranged so that with its right half we see the right picture on the slide, and with its left half the left picture, it squints them both inward, so that they run together and form a single picture.

Such are the stereoscope and the photograph, by the aid of which *form* is henceforth to make itself seen through the world of intelligence, as thought has long made itself heard by means of the art of printing. The *morphotype*, or form-print, must hereafter take its place by the side of the *logotype*, or word-print. The *stereograph*, as we have called the double picture designed for the stereoscope, is

to be the card of introduction to make all mankind acquaintances.

The first effect of looking at a good photograph through the stereoscope is a surprise such as no painting ever produced. The mind feels its way into the very depths of the picture. The scraggy branches of a tree in the foreground run out at us as if they would scratch our eyes out. The elbow of a figure stands forth so as to make us almost uncomfortable. Then there is such a frightful amount of detail, that we have the same sense of infinite complexity which Nature gives us. A painter shows us masses; the stereoscopic figure spares us nothing, — all must be there, every stick, straw, scratch, as faithfully as the dome of St. Peter's, or the summit of Mont Blanc, or the ever-moving stillness of Niagara. The sun is no respecter of persons or of things.

This is one infinite charm of the photographic delineation. Theoretically, a perfect photograph is absolutely inexhaustible. In a picture you can find nothing which the artist

has not seen before you ; but in a perfect photograph there will be as many beauties lurking, unobserved, as there are flowers that blush unseen in forests and meadows. It is a mistake to suppose one knows a stereoscopic picture when he has studied it a hundred times by the aid of the best of our common instruments. Do we know all that there is in a landscape by looking out at it from our parlor windows ? In one of the glass stereoscopic views of Table Rock, two figures, so minute as to be mere objects of comparison with the surrounding vastness, may be seen standing side by side. Look at the two faces with a strong magnifier, and you could identify their owners, if you met them in a court of law.

Many persons suppose that they are looking on *miniatures* of the objects represented, when they see them in the stereoscope. They will be surprised to be told that they see most objects as large as they appear in nature. A few simple experiments will show how what we see in ordinary vision is modified in our

perceptions by what we think we see. We made a sham stereoscope, the other day, with no glasses, and an opening in the place where the pictures belong, about the size of one of the common stereoscopic pictures. Through this we got a very ample view of the town of Cambridge, including Mount Auburn and the Colleges, in a single field of vision. We do not recognize how minute distant objects really look to us, without something to bring the fact home to our conceptions. A man does not deceive us as to his real size when we see him at the distance of the length of Cambridge Bridge. But hold a common black pin before the eyes at the distance of distinct vision, and one twentieth of its length, nearest the point, is enough to cover him so that he cannot be seen. The head of the same pin will cover one of the Cambridge horse-cars at the same distance, and conceal the tower of Mount Auburn, as seen from Boston.

We are near enough to an edifice to see it well, when we can easily read an inscription upon it. The stereoscopic views of the arches

of Constantine and of Titus give not only every letter of the old inscriptions, but render the grain of the stone itself. On the pediment of the Pantheon may be read, not only the words traced by Agrippa, but a rough inscription above it, scratched or hacked into the stone by some wanton hand during an insurrectionary tumult.

This distinctness of the lesser details of a building or a landscape often gives us incidental truths which interest us more than the central object of the picture. Here is Alloway Kirk, in the churchyard of which you may read a real story by the side of the ruin that tells of more romantic fiction. There stands the stone "Erected by James Russell, seedsman, Ayr, in memory of his children," — three little boys, James and Thomas and John, all snatched away from him in the space of three successive summer-days, and lying under the matted grass in the shadow of the old witch-haunted walls. It was Burns's Alloway Kirk we paid for, and we find we have bought a share in the griefs of James Russell, seedsman; for is not

the stone that tells this blinding sorrow of real life the true centre of the picture, and not the roofless pile which reminds us of an idle legend?

We have often found these incidental glimpses of life and death running away with us from the main object the picture was meant to delineate. The more evidently accidental their introduction, the more trivial they are in themselves, the more they take hold of the imagination. It is common to find an object in one of the twin pictures which we miss in the other; the person or the vehicle having moved in the interval of taking the two photographs. There is before us a view of the Pool of David at Hebron, in which a shadowy figure appears at the water's edge, in the right-hand farther corner of the right-hand picture only. This muffled shape stealing silently into the solemn scene has already written a hundred biographies in our imagination. In the lovely glass stereograph of the Lake of Brienz, on the left-hand side, a vaguely hinted female figure stands by the margin of the fair water; on the other side

of the picture she is not seen. This is life; we seem to see her come and go. All the longings, passions, experiences, possibilities of womanhood animate that gliding shadow which has flitted through our consciousness, nameless, dateless, featureless, yet more profoundly real than the sharpest of portraits traced by a human hand. Here is the Fountain of the Ogre, at Berne. In the right picture two women are chatting, with arms akimbo, over its basin; before the plate for the left picture is got ready, "one shall be taken and the other left"; look! on the left side there is but one woman, and you may see the blur where the other is melting into thin air as she fades forever from your eyes.

O, infinite volumes of poems that I treasure in this small library of glass and pasteboard! I creep over the vast features of Rameses, on the face of his rock-hewn Nubian temple; I scale the huge mountain-crystal that calls itself the Pyramid of Cheops. I pace the length of the three Titanic stones of the wall of Baalbec, — mightiest masses of quarried rock that man

has lifted into the air; and then I dive into some mass of foliage with my microscope, and trace the veinings of a leaf so delicately wrought in the painting not made with hands, that I can almost see its down and the green aphid that sucks its juices. I look into the eyes of the caged tiger, and on the scaly train of the crocodile, stretched on the sands of the river that has mirrored a hundred dynasties. I stroll through Rhenish vineyards, I sit under Roman arches, I walk the streets of once buried cities, I look into the chasms of Alpine glaciers, and on the rush of wasteful cataracts. I pass, in a moment, from the banks of the Charles to the ford of the Jordan, and leave my outward frame in the arm-chair at my table, while in spirit I am looking down upon Jerusalem from the Mount of Olives.

“Give me the full tide of life at Charing Cross,” said Dr. Johnson. Here is Charing Cross, but without the full tide of life. A perpetual stream of figures leaves no definite shapes upon the picture. But on one side of this stereoscopic doublet a little London “gent” is lean-

ing pensively against a post; on the other side he is seen sitting at the foot of the next post;—what is the matter with the little “gent”?

The very things which an artist would leave out, or render imperfectly, the photograph takes infinite care with, and so makes its illusions perfect. What is the picture of a drum without the marks on its head where the beating of the sticks has darkened the parchment? In three pictures of the Ann Hathaway Cottage, before us,—the most perfect, perhaps, of all the paper stereographs we have seen,—the door at the farther end of the cottage is open, and we see the marks left by the rubbing of hands and shoulders as the good people came through the entry, or leaned against it, or felt for the latch. It is not impossible that scales from the epidermis of the trembling hand of Ann Hathaway's young suitor, Will Shakespeare, are still adherent about the old latch and door, and that they contribute to the stains we see in our picture.

Among the accidents of life, as delineated in

the stereograph, there is one that rarely fails in any extended view which shows us the details of streets and buildings. There may be neither man nor beast nor vehicle to be seen. You may be looking down on a place in such a way that none of the ordinary marks of its being actually inhabited show themselves. But in the rawest Western settlement and the oldest Eastern city, in the midst of the shanties at Pike's Peak and stretching across the courtyards as you look into them from above the clay-plastered roofs of Damascus, wherever man lives with any of the decencies of civilization, you will find the *clothes-line*. It may be a fence, (in Ireland,) — it may be a tree, (if the Irish license is still allowed us,) — but clothes-drying, or a place to dry clothes on, the stereoscopic photograph insists on finding, wherever it gives us a group of houses. This is the city of Berne. How it brings the people who sleep under that roof before us to see their sheets drying on that fence; and how real it makes the men in that house to look at their shirts hanging, arms down, from yonder line!

The reader will, perhaps, thank us for a few hints as to the choice of stereoscopes and stereoscopic pictures. The only way to be sure of getting a good instrument is to try a number of them, but it may be well to know which are worth trying. Those made with achromatic glasses may be as much better as they are dearer, but we have not been able to satisfy ourselves of the fact. We do not commonly find any trouble from chromatic aberration (or false color in the image). It is an excellent thing to have the glasses adjust by pulling out and pushing in, either by the hand, or, more conveniently, by a screw. The large instruments, holding twenty-five slides, are best adapted to the use of those who wish to show their views often to friends; the owner is a little apt to get tired of the unvarying round in which they present themselves. Perhaps we relish them more for having a little trouble in placing them, as we do nuts that we crack better than those we buy cracked. In optical effect, there is not much difference between them and the best ordinary instruments. We

employ one stereoscope with adjusting glasses for the hand, and another common one upon a broad rosewood stand. The stand may be added to any instrument, and is a great convenience.

Some will have none but glass stereoscopic pictures; paper ones are not good enough for them. Wisdom dwells not with such. It is true that there is a brilliancy in a glass picture, with a flood of light pouring through it, which no paper one, with the light necessarily falling *on* it, can approach. But this brilliancy fatigues the eye much more than the quiet reflected light of the paper stereograph. Twenty-five glass slides, well inspected in a strong light, are *good* for one headache, if a person is disposed to that trouble.

Again, a good paper photograph is infinitely better than a bad glass one. We have a glass stereograph of Bethlehem, which looks as if the ground were covered with snow, — and paper ones of Jerusalem, colored and uncolored, much superior to it both in effect and detail. The Oriental pictures, we think, are

apt to have this white, patchy look ; possibly we do not get the best in this country.

A good view on glass or paper is, as a rule, best uncolored. But some of the American views of Niagara on glass are greatly improved by being colored ; the water being rendered vastly more suggestive of the reality by the deep green tinge. *Per contra*, we have seen some American views so carelessly colored that they were all the worse for having been meddled with. The views of the Hathaway Cottage, before referred to, are not only admirable in themselves, but some of them are admirably colored also. Few glass stereographs compare with them as real representatives of Nature.

In choosing stereoscopic pictures, beware of investing largely in *groups*. The owner soon gets tired to death of them. Two or three of the most striking among them are worth having, but mostly they are detestable, — vulgar repetitions of vulgar models, shamming grace, gentility, and emotion, by the aid of costumes, attitudes, expressions, and accesso-

ries worthy of a Thespian society of candle-snuffers. In buying brides under veils, and such figures, look at the lady's *hands*. You will very probably find the young countess is a maid-of-all-work. The presence of a human figure adds greatly to the interest of all architectural views, by giving us a standard of size, and should often decide our choice out of a variety of such pictures. No view pleases the eye which has glaring patches in it, — a perfectly white-looking river, for instance, — or trees and shrubs in full leaf, but looking as if they were covered with snow, — or glaring roads, or frosted-looking stones and pebbles. As for composition in landscape, each person must consult his own taste. All have agreed in admiring many of the Irish views, as those about the Lakes of Killarney, for instance, which are beautiful alike in general effect and in nicety of detail. The glass views on the Rhine, and of the Pyrenees in Spain, are of consummate beauty. As a specimen of the most perfect, in its truth and union of harmony and contrast, the view of the Circus of

Gavarni, with the female figure on horseback in the front ground, is not surpassed by any we remember to have seen.

What is to come of the stereoscope and the photograph we are almost afraid to guess, lest we should seem extravagant. But, premising that we are to give a *colored* stereoscopic mental view of their prospects, we will venture on a few glimpses at a conceivable, if not a possible future.

Form is henceforth divorced from matter. In fact, matter as a visible object is of no great use any longer, except as the mould on which form is shaped. Give us a few negatives of a thing worth seeing, taken from different points of view, and that is all we want of it. Pull it down or burn it up, if you please. We must, perhaps, sacrifice some luxury in the loss of color; but form and light and shade are the great things, and even color can be added, and perhaps by and by may be got direct from Nature.

There is only one Colosseum or Pantheon;

but how many millions of potential negatives have they shed — representatives of billions of pictures — since they were erected! Matter in large masses must always be fixed and dear; form is cheap and transportable. We have got the fruit of creation now, and need not trouble ourselves with the core. Every conceivable object of Nature and Art will soon scale off its surface for us. Men will hunt all curious, beautiful, grand objects, as they hunt the cattle in South America, for their *skins*, and leave the carcasses as of little worth.

The consequence of this will soon be such an enormous collection of forms that they will have to be classified and arranged in vast libraries, as books are now. The time will come when a man who wishes to see any object, natural or artificial, will go to the Imperial, National, or City Stereographic Library, and call for its skin or form, as he would for a book at any common library. We do now distinctly propose the creation of a comprehensive and systematic stereographic library,

where all men can find the special forms they particularly desire to see as artists, or as scholars, or as mechanics, or in any other capacity. Already a workman has been travelling about the country with stereographic views of furniture, showing his employer's patterns in this way, and taking orders for them. This is a mere hint of what is coming before long.

Again, we must have special stereographic collections, just as we have professional and other special libraries. And, as a means of facilitating the formation of public and private stereographic collections, there must be arranged a comprehensive system of exchanges, so that there may grow up something like a universal currency of these bank-notes, or promises to pay in solid substance, which the sun has engraved for the great Bank of Nature.

To render comparison of similar objects, or of any that we may wish to see side by side, easy, they should be taken, so far as possible, with camera-lenses of the same focal length, at the same distance, and viewed through stereo-

scopic lenses of the same pattern. In this way the eye is enabled to form the most rapid and exact conclusions. If the "great elm" and the Cowthorpe oak, if the State-House and St. Peter's, were taken on the same scale, and looked at with the same magnifying power, we should compare them without the possibility of being misled by those partialities which might tend to make us overrate the indigenous vegetable and the dome of our native Michel Angelo.

The next European war will send us stereographs of battles. It is asserted that a bursting shell can be photographed. The time is perhaps at hand when a flash of light, as sudden and brief as that of the lightning which shows a whirling wheel standing stock still, shall preserve the very instant of the shock of contact of the mighty armies that are even now gathering. The lightning from heaven does actually photograph natural objects on the bodies of those it has just blasted, — so we are told by many witnesses. The lightning of clashing sabres and bayonets may

be forced to stereotype itself in a stillness as complete as that of the tumbling tide of Niagara as we see it self-pictured.

We should be led on too far, if we developed our belief as to the transformations to be wrought by this greatest of human triumphs over earthly conditions, the divorce of form and substance. Let our readers fill out a blank check on the future as they like, — we give our indorsement to their imaginations beforehand. We are looking into stereoscopes as pretty toys, and wondering over the photograph as a charming novelty; but before another generation has passed away, it will be recognized that a new epoch in the history of human progress dates from the time when He who

“never but in uncreated light

Dwelt from eternity ”

took a pencil of fire from the “angel standing in the sun,” and placed it in the hands of a mortal.

SUN-PAINTING AND SUN-SCULPTURE;

WITH A STEREOSCOPIC TRIP ACROSS THE ATLANTIC.

THERE is one old fable which Lord Bacon, in his "Wisdom of the Ancients," has not interpreted. This is the flaying of Marsyas by Apollo. Everybody remembers the accepted version of it, namely, — that the young shepherd found Minerva's flute, and was rash enough to enter into a musical contest with the God of Music. He was vanquished, of course, — and the story is, that the victor fastened him to a tree and flayed him alive.

But the God of Song was also the God of Light, and a moment's reflection reveals the true significance of this seemingly barbarous story. Apollo was pleased with his young rival, fixed him in position against an iron rest, (the *tree* of the fable,) and took a *photograph*, a sun-picture, of him. This thin film

or *skin* of light and shade was absurdly interpreted as being the *cutis*, or untanned leather integument of the young shepherd. The human discovery of the art of photography enables us to rectify the error and restore that important article of clothing to the youth, as well as to vindicate the character of Apollo. There is one spot less upon the sun since the theft from heaven of Prometheus Daguerre and his fellow-adventurers has enabled us to understand the ancient legend.

We are now flaying our friends and submitting to be flayed ourselves, every few years or months or days, by the aid of the trenchant sunbeam which performed the process for Marsyas. All the world has to submit to it; — kings and queens with the rest. The monuments of Art and the face of Nature herself are treated in the same way. We lift an impalpable scale from the surface of the Pyramids. We slip off from the dome of St. Peter's that other imponderable dome which fitted it so closely that it betrays every scratch on the original. We skim off a thin, dry cuticle from

the rapids of Niagara, and lay it on our unmoistened paper without breaking a bubble or losing a speck of foam. We steal a landscape from its lawful owners, and defy the charge of dishonesty. We skin the flints by the wayside, and nobody accuses us of meanness.

These miracles are being worked all around us so easily and so cheaply that most people have ceased to think of them as marvels. There is a photographer established in every considerable village, — nay, one may not unfrequently see a photographic *ambulance* standing at the wayside upon some vacant lot where it can squat unchallenged in the midst of burdock and plantain and apple-Peru, or making a long halt in the middle of a common by special permission of the "Selectmen."

We must not forget the inestimable preciousness of the new Promethean gifts because they have become familiar. Think first of the privilege we all possess now of preserving the lineaments and looks of those dear to us.

"Blest be the art which can immortalize,"

said Cowper. But remember how few painted

portraits really give their subjects. Recollect those wandering Thugs of Art whose murderous doings with the brush used frequently to involve whole families; who passed from one country tavern to another, eating and painting their way, — feeding a week upon the landlord, another week upon the landlady, and two or three days apiece upon the children; as the walls of those hospitable edifices too frequently testify even to the present day. Then see what faithful memorials of those whom we love and would remember are put into our hands by the new art, with the most trifling expenditure of time and money.

This new art is old enough already to have given us the portraits of infants who are now growing into adolescence. By and by it will show every aspect of life in the same individual, from the earliest week to the last year of senility. We are beginning to see what it will reveal. Children grow into beauty and out of it. The first line in the forehead, the first streak in the hair are chronicled without malice, but without extenuation. The footprints

of thought, of passion, of purpose are all treasured in these fossilized shadows. Family-traits show themselves in early infancy, die out, and reappear. Flitting moods which have escaped one pencil of sunbeams are caught by another. Each new picture gives us a new aspect of our friend ; we find he had not one face, but many.

It is hardly too much to say, that those whom we love no longer leave us in dying, as they did of old. They remain with us just as they appeared in life ; they look down upon us from our walls ; they lie upon our tables ; they rest upon our bosoms ; nay, if we will, we may wear their portraits, like signet-rings, upon our fingers. Our own eyes lose the images pictured on them. Parents sometimes forget the faces of their own children in a separation of a year or two. But the unfading artificial retina which has looked upon them retains their impress, and a fresh sunbeam lays this on the living nerve as if it were radiated from the breathing shape. How these shadows last, and how their originals fade away !

What is true of the faces of our friends is still

more true of the places we have seen and loved. No picture produces an impression on the imagination to compare with a photographic transcript of the home of our childhood, or any scene with which we have been long familiar. The very point which the artist omits, in his effort to produce general effect, may be exactly the one that individualizes the place most strongly to our memory. There, for instance, is a photographic view of our own birthplace, and with it of a part of our good old neighbor's dwelling. An artist would hardly have noticed a slender, dry, leafless stalk which traces a faint line, as you may see, along the front of our neighbor's house next the corner. That would be nothing to him, — but to us it marks the stem of the *honeysuckle-vine*, which we remember, with its pink and white heavy-scented blossoms, as long as we remember the stars in heaven.

To this charm of fidelity in the minutest details the stereoscope adds its astonishing illusion of solidity, and thus completes the effect which so entrances the imagination. Perhaps there is also some half-magnetic effect in the fixing of

the eyes on the twin pictures, — something like Mr. Braid's *hypnotism*, of which many of our readers have doubtless heard. At least the shutting out of surrounding objects, and the concentration of the whole attention, which is a consequence of this, produce a dream-like exaltation of the faculties, a kind of clairvoyance, in which we seem to leave the body behind us and sail away into one strange scene after another, like disembodied spirits.

“Ah, yes,” some unimaginative reader may say; “but there is no color and no motion in these pictures you think so lifelike; and at best they are but petty miniatures of the objects we see in Nature.”

But color is, after all, a very secondary quality as compared with form. We like a good crayon portrait better for the most part in black and white than in tints of pink and blue and brown. Mr. Gibson has never succeeded in making the world like his flesh-colored statues. The color of a landscape varies perpetually, with the season, with the hour of the day, with the weather, and as seen by sunlight or moonlight; yet our

home stirs us with its old associations, seen in any and every light.

As to motion, though of course it is not present in stereoscopic pictures, except in those toy-contrivances which have been lately introduced, yet it is wonderful to see how nearly the effect of motion is produced by the slight difference of light on the water or on the leaves of trees as seen by the two eyes in the double-picture.

And lastly with respect to size, the illusion is on the part of those who suppose that the eye, unaided, ever sees anything but miniatures of objects. Here is a new experiment to convince those who have not reflected on the subject that the stereoscope shows us objects of their natural size.

We had a stereoscopic view taken by Mr. Soule out of our parlor-window, overlooking the town of Cambridge, with the river and the bridge in the foreground. Now, placing this view in the stereoscope, and looking with the left eye at the right stereographic picture, while the right eye looked at the natural landscape, through the window where the view was taken,

it was not difficult so to adjust the photographic and real views that one overlapped the other, and then it was shown that the two almost exactly coincided in all their dimensions.

Another point in which the stereograph differs from every other delineation is in the character of its evidence. A simple photographic picture may be tampered with. A lady's portrait has been known to come out of the finishing-artist's room ten years younger than when it left the camera. But try to mend a stereograph and you will soon find the difference. Your marks and patches float above the picture and never identify themselves with it. We had occasion to put a little cross on the pavement of a double photograph of Canterbury Cathedral, — copying another stereoscopic picture where it was thus marked. By careful management the two crosses were made perfectly to coincide in the field of vision, but the image seemed suspended above the pavement, and did not absolutely designate any one stone, as it would have done if it had been a part of the original picture. The impossibility of the stereograph's perjuring itself is a

curious illustration of the law of evidence. "At the mouth of *two witnesses*, or of three, shall he that is worthy of death be put to death; but at the mouth of one he shall not be put to death." No woman may be declared youthful on the strength of a single photograph; but if the stereoscopic twins say she is young, let her be so acknowledged in the high court of chancery of the God of Love.

Some two or three years since, we called the attention of the readers of this magazine to the subject of the stereoscope and the stereograph. Some of our expressions may have seemed extravagant, as if heated by the interest which a curious novelty might not unnaturally excite. We have not lost any of the enthusiasm and delight which that article must have betrayed. After looking over perhaps a hundred thousand stereographs and making a collection of about a thousand, we should feel the same excitement on receiving a new lot to look over and select from as in those early days of our experience. To make sure that this early interest has not

cooled, let us put on record one or two convictions of the present moment.

First, as to the wonderful nature of the invention. If a strange planet should happen to come within hail, and one of its philosophers were to ask us, as it passed, to hand him the most remarkable material product of human skill, we should offer him, without a moment's hesitation, a stereoscope containing an *instantaneous* double-view of some great thoroughfare, — one of Mr. Anthony's views of Broadway, (No. 203,) for instance.

Secondly, of all artificial contrivances for the gratification of human taste, we seriously question whether any offers so much, on the whole, to the enjoyment of the civilized races, as the self-picturing of Art and Nature, — with three exceptions: namely, dress, the most universal, architecture, the most imposing, and music, the most exciting, of factitious sources of pleasure.

No matter whether this be an extravagance or an over-statement; none can dispute that we have a new and wonderful source of pleasure in the sun-picture, and especially in the solid sun-

sculpture of the stereograph. Yet there is a strange indifference to it, even up to the present moment, among many persons of cultivation and taste. They do not seem to have waked up to the significance of the miracle which the Lord of Light is working for them. The cream of the visible creation has been skimmed off; and the sights which men risk their lives and spend their money and endure sea-sickness to behold, — the views of Nature and Art which make exiles of entire families for the sake of a look at them, and render “bronchitis” and dyspepsia, followed by leave of absence, endurable dispensations to so many worthy shepherds, — these sights, gathered from Alps, temples, palaces, pyramids, are offered you for a trifle, to carry home with you, that you may look at them at your leisure, by your fireside, with perpetual fair weather, when you are in the mood, without catching cold, without following a *valet-de-place*, in any order of succession, — from a glacier to Vesuvius, from Niagara to Memphis, — as long as you like, and breaking off as suddenly as you like; — and you, native of this incomparably dull planet, have

hardly troubled yourself to look at this divine gift, which, if an angel had brought it from some sphere nearer to the central throne, would have been thought worthy of the celestial messenger to whom it was intrusted !

It seemed to us that it might possibly awaken an interest in some of our readers, if we should carry them with us through a brief stereographic trip, — describing, not from places, but from the photographic pictures of them which we have in our own collection. Again, those who have collections may like to compare their own opinions of particular pictures mentioned with such as are here expressed, and those who are buying stereographs may be glad of some guidance in choosing.

But the reader must remember that this trip gives him only a glimpse of a few scenes selected out of our gallery of a thousand. To visit them all, as tourists visit the realities, and report what we saw, with the usual explanations and historical illustrations, would make a formidable book of travels.

Before we set out, we must know something of the sights of our own country. At least we must see Niagara. The great fall shows infinitely best on glass. Thomson's "Point View, 28," would be a perfect picture of the Falls in summer, if a lady in the foreground had not moved her shawl while the pictures were taking, or in the interval between taking the two. His winter view, "Terrapin Tower, 37," is perfection itself. Both he and Evans have taken fine views of the rapids, *instantaneous*, catching the spray as it leaped and the clouds overhead. Of Blondin on his rope there are numerous views; standing on one foot, on his head, carrying a man on his back, and one frightful picture, where he hangs by one leg, head downward, over the abyss. The best we have seen is Evans's No. 5, a front view, where every muscle stands out in perfect relief, and the symmetry of the most unimpressible of mortals is finely shown. It literally makes the head swim to fix the eyes on some of these pictures. It is a relief to get away from such fearful sights and look up at the Old Man of

the Mountain. There stands the face, without any humanizing help from the hand of an artist. Mr. Bierstadt has given it to us very well. Rather an imbecile old gentleman, one would say, with his mouth open; a face such as one may see hanging about railway-stations, and, what is curious, a New England style of countenance. Let us flit again, and just take a look at the level sheets of water and broken falls of Trenton, — at the oblong, almost squared arch of the Natural Bridge, — at the ruins of the Pemberton Mills, still smoking, — and so come to Mr. Barnum's "Historical Series." Clark's Island, with the great rock by which the Pilgrims "rested, according to the commandment," on the first Sunday, or Sabbath, as they loved to call it, which they passed in the harbor of Plymouth, is the most interesting of them all to us. But here are many scenes of historical interest connected with the great names and events of our past. The Washington Elm, at Cambridge, (through the branches of which we saw the first sunset we ever looked upon, from this planet, at least,) is here in all its magnificent drapery of

hanging foliage. Mr. Soule has given another beautiful view of it, when stripped of its leaves, equally remarkable for the delicacy of its pendent, hair-like spray.

We should keep the reader half an hour looking through this series, if we did not tear ourselves abruptly away from it. We are bound for Europe, and are to leave *via* New York immediately.

Here we are in the main street of the great city. This is Mr. Anthony's miraculous instantaneous view in Broadway, (No. 203,) before referred to. It is the Oriental story of the petrified city made real to our eyes. The character of it is perhaps best shown by the use we make of it in our lectures, to illustrate the physiology of walking. Every foot is caught in its movement with such suddenness that it shows as clearly as if quite still. We are surprised to see, in one figure, how long the stride is, — in another, how much the knee is bent, — in a third, how curiously the heel strikes the ground before the rest of the foot, — in all, how singularly the body is accommodated to the action of walking. The

facts which the brothers Weber, laborious German experimenters and observers, had carefully worked out on the bony frame, are illustrated by the various individuals comprising this moving throng. But what a wonder it is, this snatch at the central life of a mighty city as it rushed by in all its multitudinous complexity of movement! Hundreds of objects in this picture could be identified in a court of law by their owners. There stands Car No. 33 of the Astor House and Twenty-Seventh Street Fourth Avenue line. The old woman would miss an apple from that pile which you see glistening on her stand. The young man whose back is to us could swear to the pattern of his shawl. The gentleman between two others will no doubt remember that he had a headache the next morning, after this walk he is taking. Notice the caution with which the man driving the dapple-gray horse in a cart loaded with barrels holds his reins, — wide apart, one in each hand. See the shop-boys with their bundles, the young fellow with a lighted cigar in his hand, as you see by the way he keeps it off from his body,

the *gamin* stooping to pick up something in the midst of the moving omnibuses, the stout philosophical carman sitting on his cart-tail, Newman Noggs by the lamp-post at the corner. Nay, look into Car No. 33 and you may see the passengers ; — is that a young woman's face turned toward you looking out of the window ? See how the faithful sun-print advertises the rival establishment of " Meade Brothers, Ambrotypes and Photographs." What a fearfully suggestive picture ! It is a leaf torn from the book of God's recording angel. What if the sky is one great concave mirror, which reflects the picture of all our doings, and photographs every act on which it looks upon dead and living surfaces, so that to celestial eyes the stones on which we tread are written with our deeds, and the leaves of the forest are but undeveloped negatives where our summers stand self-recorded for transfer into the imperishable record ? And what a metaphysical puzzle have we here in this simple-looking paradox ! Is motion but a succession of rests ? All is still in this picture of universal movement. Take ten thousand instantaneous

photographs of the great thoroughfare in a day ; every one of them will be as still as the *tableau* in the “ Enchanted Beauty.” Yet the hurried day’s life of Broadway will have been made up of just such stillnesses. Motion is as rigid as marble, if you only take a wink’s worth of it at a time.

We are all ready to embark now. Here is the harbor ; and there lies the Great Eastern at anchor, — the biggest island that ever got adrift. Stay one moment, — they will ask us about secession and the revolted States, — it may be as well to take a look at Charleston, for an instant, before we go.

These three stereographs were sent us by a lady now residing in Charleston. The Battery, the famous promenade of the Charlestonians, since armed with twenty-four pounders facing Fort Sumter ; the interior of Fort Moultrie, with the guns since spiked by Major Anderson ; and a more extensive view of the same interior, with the flag of the Union still flying, — the free end of it tied to a gun-carriage, probably

for the convenience of the photographer, as one of the garrison explains it for us. In the distance, to the right, Fort Sumter, looking remote and inaccessible, — the terrible rattle which our foolish little spoiled sister Caroline has insisted on getting into her rash hand. How ghostly, yet how real, it looms up out of the dim atmosphere, — the guns looking over the wall and out through the embrasures, — meant for a foreign foe, — this very day (April 13th) turned in self-defence against the children of those who once fought for liberty at Fort Moultrie! It is a sad thought that there are truths which can be got out of life only by the *destructive analysis* of war. Statesmen deal in *proximate principles*, — unstable compounds; but war reduces facts to their simple elements in its red-hot crucible, with its black flux of carbon and sulphur and nitre. Let us turn our back on this miserable, even though inevitable, fraternal strife, and, closing our eyes for an instant, open them in London.

Here we are at the foot of Charing Cross.

You remember, of course, how this fine equestrian statue of Charles I. was condemned to be sold and broken up by the Parliament, but was buried and saved by the brazier who purchased it, and so reappeared after the Restoration. To the left, the familiar words, "Morley's Hotel" designate an edifice about half windows, where the plebeian traveller may sit and contemplate Northumberland House opposite, and the straight-tailed lion of the Percys surmounting the lofty battlement which crowns its broad *façade*. We could describe and criticise the statue as well as if we stood under it, but other travellers have done that. Where are all the people that ought to be seen here? Hardly more than three or four figures are to be made out; the rest were moving, and left no images in this slow, old-fashioned picture, — how unlike the miraculous "instantaneous" Broadway of Mr. Anthony we were looking at a little while ago! But there, on one side, an omnibus has stopped long enough to be caught by the sunbeams. There is a mark on it. Try it with a magnifier.

Charing

+

Strand

633.

Here are the towers of Westminster Abbey. A dead failure, as we well remember them, — miserable modern excrescences, which shame the noble edifice. We will hasten on, and perhaps by and by come back and enter the cathedral.

How natural Temple Bar looks, with the loaded coach and the cab going through the central arch, and the blur of the hurrying throng darkening the small lateral ones! A fine old structure, — always reminds a Bostonian of the old arch over which the mysterious *Boston Library* was said still to linger out its existence late into the present century. But where are the spikes on which the rebels' heads used to grin until their jaws fell off? One of Hogarth's pictures will perhaps help us to answer this question which the stereograph leaves doubtful. To the left a woman is spreading an awning before a shop; — a man would do it for her here. Ghost of a

boy with bundle, — seen with right eye only. Other ghosts of passers or loiterers, — one of a pretty woman, as we fancy at least, by the way she turns her face to us. To the right, fragments of signs, as follows :

22

PAT

CO

BR

PR

What can this be but 229, *Patent Combs and Brushes*, PROUT? At any rate, we were looking after Prout's good old establishment, (229, Strand,) which we remembered was close to Temple Bar, when we discovered these fragments, the rest being cut off by the limits of the picture.

London Bridge! Less imposing than Waterloo Bridge, but a massive pile of masonry, which looks as if its rounded piers would defy the Thames as long as those of the Bridge of Sant' Angelo have stemmed the Tiber. Figures indistinct or invisible, as usual, in the foreground, but farther on a mingled proces-

sion of coaches, cabs, carts, and people. See the groups in the recesses over the piers. The parapet is breast-high ; — a woman can climb over it, and drop or leap into the dark stream lying in deep shadow under the arches. Women take this leap often. The angels hear them like the splash of drops of blood out of the heart of our humanity. In the distance, wharves, storehouses, stately edifices, steeples, and rising proudly above them, “like a tall bully,” London Monument.

Here we are, close to the Monument. Tall, square base, with reliefs, fluted columns, queer top ; — looks like an inverted wineglass with a shaving-brush standing up on it : representative of flame, probably. Below this the square *cage* in which people who have climbed the stairs are standing ; seems to be ten or twelve feet high, and is barred or wired over. Women used to jump off from the Monument as well as from London Bridge, before they made the cage safe in this way.

“Holloa !” said a man standing in the Square one day, to his companion, — “there’s the flag coming down from the Monument !”

“It’s no flag,” said the other; “it’s a woman!”

Sure enough, and so it was.

Nobody can mistake the four pepper-boxes, with the four weathercocks on them, surmounting the corners of a great square castle, a little way from the river’s edge. That is the Tower of London. We see it behind the masts of sailing-vessels and the chimneys of steamers, gray and misty in the distance. Let us come nearer to it. Four square towers, crowned by four Oriental-looking domes, not unlike the lower half of an inverted balloon: these towers at the angles of a square building with buttressed and battlemented walls, with two ranges of round-arched windows on the side towards us. But connected with this building are other towers, round, square, octagon, walls with embrasures, moats, loop-holes, turrets, parapets, — looking as if the beef-eaters really meant to hold out, if a new army of Boulogne should cross over some fine morning. We can’t stop to go in and see the lions this morning, for we have come in sight of a great dome, and we cannot take our eyes away from it.

That is St. Paul's, the Boston State-House of London. There is a resemblance in effect, but there is a difference in dimensions, — to the disadvantage of the native edifice, as the reader may see in the plate prefixed to Dr. Bigelow's "Technology." The dome itself looks light and airy compared to St. Peter's or the Duomo of Florence, — not only absolutely, but comparatively. The colonnade on which it rests divides the honors with it. It does not brood over the city, as those two others over their subject towns. Michel Angelo's forehead repeats itself in the dome of St. Peter's. Sir Christopher had doubtless a less ample frontal development; indeed, the towers he added to Westminster Abbey would almost lead us to doubt if he had not a vacancy somewhere in his brain. But the dome of the London "State-House" is very graceful, — so light that it looks as if its lineage had been crossed by a spire. Wait until we have gilded the dome of our Boston St. Paul's before drawing any comparisons.

We have seen the outside of London. What do we care for the Crescent, and the Horse-

guards, and Nelson's Monument and the statue of Achilles, and the new Houses of Parliament? The Abbey, the Tower, the Bridge, Temple Bar, the Monument, St. Paul's: these make up the great features of the London we dream about. Let us go into the Abbey for a few moments. The "dim religious light" is pretty good, after all. We can read every letter on that mural tablet to the memory of the "most illustrious and most benevolent John Paul Howard, Earl of Stafford," "a Lover of his Country, A *Relation to Relations*," (what a eulogy and satire in that expression!) and in many ways virtuous and honorable, as "The Countess Dowager, in Testimony of her Great Affection and Respect to her Lord's Memory," has commemorated on his monument. We can see all the folds of the Duchess of Suffolk's dress, and the meshes of the net that confines her hair, as she lies in marble effigy on her sculptured sarcophagus. It looks old to our eyes, for she was the mother of Lady Jane Grey, and died three hundred years ago, — but see those two little stone heads lying on their stone pillow, just be-

yond the marble Duchess. They are children of Edward III., — the Black Prince's baby-brothers. They died five hundred years ago, — but what are centuries in Westminster Abbey? Under the pillared canopy, her head raised on two stone cushions, her fair, still features bordered with the spreading cap we know so well in her portraits, lies Mary of Scotland. These fresh monuments, protected from the wear of the elements, seem to make twenty generations our contemporaries. Look at this husband warding off the dart which the grim, draped skeleton is aiming at the breast of his fainting wife. Most famous, perhaps, of all the statues in the Abbey is this of Joseph Gascoigne Nightingale and his Lady, by Roubilliac. You need not cross the ocean to see it. It is here, literally, to every dimple in the back of the falling hand, and every crinkle of the vermiculated stone-work. What a curious pleasure it is to puzzle out the inscriptions on the monuments in the background! — for the beauty of your photograph is, that you may work out minute details with the microscope, just as you can with the

telescope in a distant landscape in Nature. There is a lady, for instance, leaning upon an urn, — suggestive, a little, of Morgiana and the forty thieves. Above is a medallion of one wearing a full periwig. Now for a half-inch lens to make out the specks that seem to be letters. “Erected to the Memory of William Pulteney, Earl of Bath, by his Brother” — That will do, — the inscription operates as a cold bath to enthusiasm. . But here is our own personal namesake, the once famous Rear Admiral of the White, whose biography we can find nowhere except in the “Gentleman’s Magazine,” where he divides the glory of the capture of Quebec with General Wolfe. A handsome young man with hyacinthine locks, his arms bare and one hand resting on a cannon. We remember thinking our namesake’s statue one of the most graceful in the Abbey, and have always fallen back on the memory of that and of Dryden’s Achates of the “Annus Mirabilis,” as trophies of the family.

Enough of these marbles ; there is no end to them ; the walls and floor of the great, many-

arched, thousand-pillared, sky-lifted cavern are crusted all over with them, like stalactites and stalagmites. The vast temple is alive with the images of the dead. Kings and queens, nobles, statesmen, soldiers, admirals, the great men whose deeds we all know, the great writers whose words are in all our memories, the brave and the beautiful whose fame has shrunk into their epitaphs, are all around us. What is the cry for alms that meets us at the door of the church to the mute petition of these marble beggars, who ask to warm their cold memories for a moment in our living hearts? Look up at the mighty arches overhead, borne up on tall clustered columns,—as if that avenue of Royal Palms we remember in the West India Islands (photograph) had been spirited over seas and turned into stone. Make your obeisance to the august shape of Sir Isaac Newton, reclining like a weary swain in the niche at the side of the gorgeous screen. Pass through Henry VII.'s Chapel, a temple cut like a cameo. Look at the shining oaken stalls of the knights. See the banners overhead. There is no such speaking

record of the lapse of time as these banners. There is one of them beginning to drop to pieces; the long day of a century has decay for its dial-shadow.

We have had a glimpse of London,—let us make an excursion to Stratford-on-Avon.

Here you see the Shakespeare House as it was,—wedged in between, and joined to, the “Swan and Maidenhead” Tavern and a mean and dilapidated brick building, not much worse than itself, however. The first improvement (as you see in No. 2) was to pull down this brick building. The next (as you see in No. 3) was to take away the sign and the bay-window of the “Swan and Maidenhead” and raise two gables out of its roof, so as to restore something like its ancient aspect. Then a rustic fence was put up, and the outside arrangements were completed. The cracked and faded sign projects as we remember it of old. In No. 1 you may read “THE IMMORTAL SHAKESPEARE . . . *Born in This House*” about as well as if you had been at the trouble and expense of going there.

But here is the back of the house. Did little

Will use to look out at this window with the bull's-eye panes? Did he use to drink from this old pump, or the well in which it stands? Did his shoulders rub against this angle of the old house, built with rounded bricks? It is a strange picture, and sets us dreaming. Let us go in and up-stairs. In this room he was born. They say so, and we will believe it. Rough walls, rudely boarded floor, wide window with small panes, small bust of him between two cactuses in bloom on window-seat. An old table covered with prints and stereographs, a framed picture, and under it a notice "Copies of this Portrait" the rest, in fine print, can only be conjectured.

Here is the Church of the Holy Trinity, in which he lies buried. The trees are bare that surround it; see the rooks' nests in their tops. The Avon is hard by, dammed just here with flood-gates, like a canal. Change the season, if you like, — here are the trees in leaf, and in their shadow the tombs and graves of the mute, inglorious citizens of Stratford.

Ah, how natural this interior, with its great

stained window, its mural monuments, and its slab in the pavement with the awful inscription! That we cannot see here, but there is the tablet with the bust we know so well. But this, after all, is Christ's temple, not Shakespeare's. Here are the worshippers' seats, — mark how the polished wood glistens, — there is the altar, and there the open prayer-book, — you can almost read the service from it. Of the many striking things that Henry Ward Beecher has said, nothing, perhaps, is more impressive than his account of his partaking of the communion at that altar in the church where Shakespeare rests. A memory more divine than his overshadowed the place, and he thought of Shakespeare, "as he thought of ten thousand things, without the least disturbance of his devotion," though he was kneeling directly over the poet's dust.

If you will stroll over to Shottery now with me, we can see the Ann Hathaway cottage from four different points, which will leave nothing outside of it to be seen. Better to look at than to live in. A fearful old place, full of small vertebrates that squeak and smaller articulates that

bite, if its outward promise can be trusted. A thick thatch covers it like a coarse-haired hide. It is patched together with bricks and timber, and partly crusted with scaling plaster. One window has the diamond panes framed in lead, such as we remember seeing of old in one or two ancient dwellings in the town of Cambridge, hard by. In this view a young man is sitting, pensive, on the steps which Master William, too ardent lover, used to climb with hot haste and descend with lingering delay. Young men die, but youth lives. Life goes on in the cottage just as it used to three hundred years ago. On the rail before the door sits the puss of the household, of the fiftieth generation; perhaps, from that "harmless, necessary cat" which purred round the poet's legs as he sat talking love with Ann Hathaway. At the foot of the steps is a huge basin, and over the rail hangs — a dish-cloth, drying. In these homely accidents of the very instant, that cut across our romantic ideals with the sharp edge of reality, lies one of the ineffable charms of the sun-picture. It is a little thing that gives life to a scene or a face; por-

traits are never absolutely alive, because they do not *wink*.

Come, we are full of Shakespeare ; let us go up among the hills and see where another poet lived and lies. Here is Rydal Mount, the home of Wordsworth. Two-storied, ivy-clad, hedge-girdled, dropped into a crease among the hills that look down dimly from above, as if they were hunting after it as ancient dames hunt after a dropped thimble. In these walks he used to go "booing about," as his rustic neighbor had it, — reciting his own verses. Here is his grave in Grasmere. A plain slab, with nothing but his name. Next him lies Dora, his daughter, beneath a taller stone bordered with a tracery of ivy, and bearing in relief a lamb and a cross. Her husband lies next in the range. The three graves have just been shorn of their tall grass, — in this other view you may see them half hidden by it. A few flowering stems have escaped the scythe in the first picture, and nestle close against the poet's headstone. Hard by sleeps poor Hartley Coleridge, with a slab of freestone graven with a cross and

a crown of thorns, and the legend, "By thy Cross and Passion, Good Lord, deliver us." * All around are the graves of those whose names the world has not known. This view (302), from above Rydal Mount, is so Claude-like, especially in its trees, that one wants the solemn testimony of the double-picture to believe it an actual transcript of Nature. Of the other English landscapes we have seen, one of the most pleasing on the whole is that marked 43,—Sweden Bridge, near Ambleside. But do not fail to notice St. Mary's Church (101) in the same mountain-village. It grows out of the ground like a crystal, with spur-like gables budding out all the way up its spire, as if they were ready to flower into pinnacles, like such as have sprung up all over the marble multiflora of Milan.

And as we have been looking at a steeple, let us flit away for a moment and pay our rever-

* Miss Martineau, who went to his funeral, and may be supposed to describe after a visit to the churchyard, gives the inscription incorrectly. See *Atlantic Monthly* for May, 1861, p. 552. Tourists cannot be trusted; stereographs can.

ence at the foot of the tallest spire in England,—that of Salisbury Cathedral. Here we see it from below, looking up,—one of the most striking pictures ever taken. Look well at it; Chichester has just fallen, and this is a good deal like it, — some have thought raised by the same builder. It has bent somewhat (as you may see in these other views) from the perpendicular; and though it has been strengthened with clamps and framework, it must crash some day or other, for there has been a great giant tugging at it day and night for five hundred years, and it will at last shut up into itself or topple over with a sound and thrill that will make the dead knights and bishops shake on their stone couches, and be remembered all their days by year-old children. This is the first cathedral we ever saw, and none ever so impressed us since. Vast, simple, awful in dimensions and height, just beginning to grow tall at the point where our proudest steeples taper out, it fills the whole soul, pervades the vast landscape over which it reigns, and, like Niagara and the Alps, abolishes that five or six foot

personality in the beholder which is fostered by keeping company with the little life of the day in its little dwellings. In the Alps your voice is as the piping of a cricket. Under the sheet of Niagara the beating of your heart seems too trivial a movement to take reckoning of. In the buttressed hollow of one of these palæozoic cathedrals you are ashamed of your ribs, and blush for the exiguous pillars of bone on which your breathing structure reposes. Before we leave Salisbury, let us look for a moment into its cloisters. A green court-yard, with a covered gallery on its level, opening upon it through a series of Gothic arches. You may learn more, young American, of the difference between your civilization and that of the Old World by one look at this than from an average lyceum-lecture an hour long. Seventy years of life means a great deal to you ; how little, comparatively, to the dweller in these cloisters ! You will have seen a city grow up about you, perhaps ; your whole world will have been changed half a dozen times over. What change for him ? The cloisters are just as when he

entered them, — just as they were a hundred years ago, — just as they will be a hundred years hence.

These old cathedrals are beyond all comparison what are best worth seeing, of man's handiwork, in Europe. How great the delight to be able to bring them, bodily, as it were, to our own firesides ! A hundred thousand pilgrims a year used to visit Canterbury. Now Canterbury visits us. See that small white mark on the pavement. That marks the place where the slice of Thomas à Becket's skull fell when Reginald Fitz Urse struck it off with a "Ha !" that seems to echo yet through the vaulted arches. And see the broad stairs, worn by the pilgrim's knees as they climbed to the martyr's shrine. For four hundred years this stream of worshippers was wearing itself into these stones. But there was the place where they knelt before the altar called "Becket's Crown." No ! the story that those deep hollows in the marble were made by the pilgrims' knees is too much to believe, — but there are the hollows and that is the story.

And now, if you would see a perfect gem of

the art of photography, and at the same time an unquestioned monument of antiquity which no person can behold without interest, look upon this, — the monument of the Black Prince. There is hardly a better piece of work to be found. His marble effigy lies within a railing, with a sculptured canopy hung over it, like a sounding-board. Above this, on a beam stretched between two pillars, hang the arms he wore at the battle of Poitiers, — the tabard, the shield, the helmet, the gauntlets, and the sheath that held his sword, which weapon it is said that Cromwell carried off. The outside casing of the shield has broken away, as you observe, but the lions or lizards, or whatever they were meant for, and the flower-de-luces or plumes may still be seen. The metallic scales, if such they were, have partially fallen from the tabard or frock, and the leather shows bare in parts of it.

Here, hard by, is the sarcophagus of Henry IV. and his queen, also enclosed with a railing like the other. It was opened about thirty years ago in presence of the dean of the cathe-

dral. There was a doubt, so it is said, as to the monarch's body having been really buried there. Curiosity had nothing to do with it, it is to be presumed. Every over-ground sarcophagus is opened sooner or later, as a matter of course. It was hard work to get it open; it had to be sawed. They found a quantity of *hay*, — fresh herbage, perhaps, when it was laid upon the royal body four hundred years ago, — and a cross of twigs. A silken mask was on the face. They raised it, and saw his red beard, his features well preserved, a gap in the front teeth, which there was probably no court-dentist to supply, — the same face the citizens looked on four centuries ago

“In London streets that coronation-day,
When Bolingbroke rode on roan Barbary”;

then they covered him up to take another nap of a few centuries, until another dean has an historical doubt, — at last, perhaps, to be transported by some future Australian Barnum to the Sidney Museum and exhibited as the mummy of one of the English Pharaohs. Look, too, at the “Warrior's Chapel,” in the same

cathedral. It is a very beautiful stereograph, and may be studied for a long time, for it is full of the most curious monuments.

Before leaving these English churches and monuments let us enter, if but for a moment, the famous Beauchamp Chapel at Warwick. The finest of the views (323, 324) recalls that of the Black Prince's tomb, as a triumph of photography. Thus, while the whole effect of the picture is brilliant and harmonious, we shall find, on taking a lens, that we can count every individual bead in the chaplet of the monk who is one of the more conspicuous reliefs on the sarcophagus. The figure of this monk itself is about half an inch in height, and its face may be completely hidden by the head of a pin. The whole chapel is a marvel of workmanship and beauty. The monument of Richard Beauchamp in the centre, with the frame of brass over the recumbent figure, intended to support the drapery thrown upon it to protect the statue, — with the mailed shape of the warrior, his feet in long pointed shoes resting against the muzzled bear and the griffin, his

hands raised, but not joined, — this monument, with the tomb of Dudley, Earl of Leicester, — Elizabeth's Leicester, — and that of the other Dudley, Earl of Warwick, — all enchased in these sculptured walls, and illuminated through that pictured window, where we can dimly see the outlines of saints and holy maidens, — form a group of monumental jewels such as only Henry VII.'s Chapel can equal. For these two pictures (323 and 324) let the poor student pawn his outside coat, if he cannot have them otherwise.

Of abbeyes and castles there is no end. No. 4, Tintern Abbey, is the finest, on the whole, we have ever seen. No. 2 is also very perfect and interesting. In both, the masses of ivy that clothe the ruins are given with wonderful truth and effect. Some of these views have the advantage of being very well colored. Warwick Castle (81) is one of the best and most interesting of the series of castles; Caernarvon is another still more striking.

We may as well break off here as anywhere, so far as England is concerned. England is

one great burial-ground to an American. As islands are built up out of the shields of insects, so her soil is made from the bones of her innumerable generations. No one but a travelled American feels what it is to live in a land of monuments. We are all born foundlings, except here and there, in some favored spot, where humanity has nestled for a century or two. Cut flowers of romance and poetry stuck about are poor substitutes for the growths which have their roots in an old soil that has been changing elements with men and women like ourselves for thousands of years. Perhaps it is well that we should be forced to live mainly for the future; but it is sometimes weary and prosaic.

And yet,—open this enchanted door (of pasteboard) which is the entrance to the land of BURNS, and see what one man can do to idealize and glorify the common life about him! Here is a poor “ten-footer,” as we should call it, the cottage William “Burness” built with his own hands, where he carried his young bride Agnes, and where the boy ROBERT, his first-

born, was given to the light and air which he made brighter and freer for mankind. Sit still and do not speak, — but see that your eyes do not grow dim as these pictures pass before them: The old hawthorn under which Burns sat with Highland Mary, — a venerable duenna-like tree, with thin arms and sharp elbows, and scanty *chevelure* of leaves; the Auld Brig o' Doon (No. 4), — a daring arch that leaps the sweet stream at a bound, more than half clad in a mantle of ivy, which has crept with its larvalike feet beyond the key-stone; the Twa Brigs of Ayr, with the beautiful reflections in the stream that shines under their eyebrow-arches; and poor little Alloway Kirk, with its fallen roof and high gables. Lift your hand to your eyes and draw a long breath, — for what words would come so near to us as these pictured, nay, real, memories of the dead poet who made a nation of a province, and the hearts of mankind its tributaries.

And so we pass to many-towered and turreted and pinnacled Abbotsford, and to large-windowed Melrose, and to peaceful Dryburgh,

where, under a plain bevelled slab, lies the great Romancer whom Scotland holds only second in her affections to her great poet. Here in the foreground of the Melrose Abbey view (436) is a gravestone which looks as if it might be deciphered with a lens. Let us draw out this inscription from the black archives of oblivion. Here it is : —

In Memory of
Francis Cornel, late
Labourer in Greenwell,
Who died 11th July, 1827,
aged 89 years. Also
Margaret Betty, his
Spouse, who died 2^d Dec^r,
1831, aged 89 years.

This is one charm, as we have said over and over, of the truth-telling photograph. We who write in great magazines of course float off from the wreck of our century, on our life-preserving articles, to immortality. What a delight it is to snatch at the unknown head that shows for an instant through the wave, and drag it out to personal recognition and a share in our own sempiternal buoyancy! Go and be photo-

graphed on the edge of Niagara, O unknown aspirant for human remembrance! Do not throw yourself, O traveller, into Etna, like Empedocles, but be taken by the camera standing on the edge of the crater! Who is that lady in the carriage at the door of Burns's cottage? Who is that gentleman in the shiny hat on the sidewalk in front of the Shakespeare house? Who are those two fair youths lying dead on a heap of dead at the trench's side in the cemetery of Melegnano, in that ghastly glass stereograph in our friend Dr. Bigelow's collection? Some Austrian mother has perhaps seen her boy's features in one of those still faces. All these seemingly accidental figures are not like the shapes put in by artists to fill the blanks in their landscapes, but real breathing persons, or forms that have but lately been breathing, not found there by chance, but brought there with a purpose, fulfilling some real human errand, or at least, as in the last-mentioned picture, waiting to be buried.

Before quitting the British Islands, it would be pleasant to wander through the beautiful

Vale of Avoca in Ireland, and to look on those many exquisite landscapes and old ruins and crosses which have been so admirably rendered in the stereograph. There is the Giant's Causeway, too, which our friend Mr. Waterston showed us in his Museum of Art in Chester Square before we had been able to obtain it. This we cannot stop to look at now, nor these many objects of historical or poetical interest which lie before us on our own table. Such are the pictures of Croyland Abbey, where they kept that jolly drinking-horn of "Witlaf, King of the Saxons," which Longfellow has made famous; Bedd-Gelert, the grave of the faithful hound immortalized by —nay, who has immortalized— William Spencer; the stone that marks the spot where William Rufus fell by Tyrrel's shaft; the Lion's Head in Dove Dale, fit to be compared with our own Old Man of the Mountain; the "Bowder Stone," or the great boulder of Borrowdale; and many others over which we love to dream at idle moments.

When we began these notes of travel we meant to take our fellow-voyagers over the con-

continent of Europe, and perhaps to all the quarters of the globe. We should make a book, instead of an article, if we attempted it. Let us, instead of this, devote the remaining space to an enumeration of a few of the most interesting pictures we have met with, many of which may be easily obtained by those who will take the trouble we have taken to find them.

Views of Paris are everywhere to be had, good and cheap. The finest illuminated or transparent paper view we have ever seen is one of the Imperial Throne. There is another illuminated view, the Palace of the Senate, remarkable for the beauty with which it gives the frescoes on the cupola. We have a most interesting stereograph of the Amphitheatre of Nismes, with a *bull-fight* going on in its arena at the time when the picture was taken. The contrast of the vast Roman structure, with its massive arched masonry, and the scattered assembly, which seems almost lost in the spaces once filled by the crowd of spectators who thronged to the gladiatorial shows, is one of the most striking we have ever seen. At Quim-

perlé is a house so like the curious old building lately removed from Dock Square in Boston, that it is commonly taken for it at the first view. The Roman tombs at Arles and the quaint streets at Troyes are the only other French pictures we shall speak of, apart from the cathedrals to be mentioned.

Of the views in Switzerland, it may be said that the Glaciers are perfect, in the glass pictures, at least. Waterfalls are commonly poor: the water glares and looks like cotton-wool. Staubbach, with the Vale of Lauterbrunnen, is an exquisite exception. Here are a few signal specimens of Art. No. 4018, Seelisberg, — unsurpassed by any glass stereograph we have ever seen in all the qualities that make a faultless picture. No. 4119, Mont Blanc from Sta. Rosa, — the finest view of the mountain for general effect we have met with. No. 4100, Suspension-Bridge of Fribourg, — very fine, but makes one giddy to look at it. Three different views of Goldau, where the villages lie buried under these vast masses of rock, recall the terrible catastrophe of 1806, as if it had happened but yesterday.

Almost everything from Italy is interesting. The ruins of Rome, the statues of the Vatican, the great churches, all pass before us, but in a flash, as we are expressed by them on our ideal locomotive. Observe: next to snow and ice, stone is best rendered in the stereograph. Statues are given absolutely well, except where there is much foreshortening to be done, as in this of the Torso, where you see the thigh is unnaturally lengthened. See the mark on the Dying Gladiator's nose. That is where Michel Angelo mended it. There is Hawthorne's Marble Faun (the one called of Praxiteles), the Laocoön, the Apollo Belvedere, the Young Athlete with the Strigil, the Forum, the Cloaca Maxima, the Palace of the Cæsars, the bronze Marcus Aurelius, — those wonders all the world flocks to see, — the God of Light has multiplied them all for you, and you have only to give a paltry fee to his servant to own in fee-simple the best sights that earth has to show.

But look in at Pisa one moment, not for the Leaning Tower and the other familiar objects, but for the interior of the Campo Santo, with its

holy earth, its innumerable monuments, and the fading frescos on its walls, — see ! there are the Three Kings of Andrea Orgagna. And there hang the broken chains that once, centuries ago, crossed the Arno, — standing off from the wall, so that it seems as if they might clank, if you jarred the stereoscope. Tread with us the streets of Pompeii for a moment ; there are the ruts made by the chariots of eighteen hundred years ago, — it is the same thing as stooping down and looking at the pavement itself. And here is the amphitheatre out of which the Pompeians trooped when the ashes began to fall round them from Vesuvius. Behold the famous gates of the Baptistery at Florence, — but do not overlook the exquisite iron gates of the railing outside ; think of them as you enter our own Common in Boston from West Street, through those portals which are fit for the gates of — not paradise. Look at this sugar-temple, — no, it is of marble, and is the monument of one of the Scalas at Verona. What a place for ghosts that vast *palazzo* behind it ! Shall we stand in Venice on the Bridge of Sighs, and

then take this stereoscopic gondola and go through it from St. Mark's to the Arsenal? Not now. We will only look at the Cathedral, — all the pictures under the arches show in our glass stereograph, — at the Bronze Horses, the Campanile, the Rialto, and that glorious old statue of Bartholomew Colleoni, — the very image of what a partisan leader should be, the broad-shouldered, slender-waisted, stern-featured old soldier who used to leap into his saddle in full armor, and whose men would never follow another leader when he died. Well, but there have been soldiers in Italy since his day. Here are the encampments of Napoleon's army in the recent campaign. This is the battle-field of Magenta with its trampled grass and splintered trees, and the fragments of soldiers' accoutrements lying about.

And here (leaving our own collection for our friend's before-mentioned) here is the great trench in the cemetery of Melegnano, and the heap of dead lying unburied at its edge. Look away, young maiden and tender child, for this is what war leaves after it. Flung together, like

sacks of grain, some terribly mutilated, some without mark of injury, all or almost all with a still, calm look on their faces. The two youths before referred to lie in the foreground, so simple-looking, so like boys who had been overworked and were lying down to sleep, that one can hardly see the picture for the tears these two fair striplings bring into the eyes.

The Pope must bless us before we leave Italy. See, there he stands on the balcony of St. Peter's, and a vast crowd before him with uncovered heads as he stretches his arms and pronounces his benediction.

Before entering Spain we must look at the Circus of Gavarni, a natural amphitheatre in the Pyrenees. It is the most picturesque of stereographs, and one of the best. As for the Alhambra, we can show that in every aspect; and if you do not vote the lions in the court of the same a set of mechanical h****gs and nursery bugaboos, we have no skill in entomology. But the Giralda, at Seville, is really a grand tower, worth looking at. The Seville Boston-folks consider it the linchpin, at least of this

rolling universe. And what a fountain this is in the Infanta's garden! what shameful beasts, swine and others, lying about on their stomachs! the whole surmounted by an unclad gentleman squeezing another into the convulsions of a galvanized frog! Queer tastes they have in the Old World. At the fountain of the Ogre in Berne, the giant, or large-mouthed private person, upon the top of the column, is eating a little infant as one eats a radish, and has plenty more, — a whole bunch of such, — in his hand, or about him.

A voyage down the Rhine shows us nothing better than St. Goar (No. 2257), every house on each bank clean and clear as a crystal. The Heidelberg views are admirable; — you see a slight streak in the background of this one: we remember seeing just such a streak from the castle itself, and being told that it was the Rhine, just visible, afar off. The man with the geese in the goose-market at Nuremberg gives stone, iron, and bronze, each in perfection.

So we come to quaint Holland, where we see wind-mills, *ponts-levis*, canals, galiots, houses

with gable-ends to the streets and little mirrors outside the windows, slanted so as to show the frowns inside what is going on.

We must give up the cathedrals, after all: Santa Maria del Fiore, with Brunelleschi's dome, which Michel Angelo would n't copy and could n't beat; Milan, aflame with statues, like a thousand-tapered candelabrum; Tours, with its embroidered portal, so like the lace of an archbishop's robe; even Notre Dame of Paris, with its new spire; Rouen, Amiens, Chartres,—we must give them all up.

Here we are at Athens, looking at the buttressed Acropolis and the ruined temples,—the Doric Parthenon, the Ionic Erechtheum, the Corinthian temple of Jupiter, and the beautiful Caryatides. But see those steps cut in the natural rock. Up those steps walked the Apostle Paul, and from that summit, Mars Hill, the Areopagus, he began his noble address, “Ye men of Athens!”

The Great Pyramid and the Sphinx! Herodotus saw them a little fresher, but of unknown antiquity,—far more unknown to him than to

us. The Colossi of the plain! Mighty monuments of an ancient and proud civilization standing alone in a desert now.

My name is Osymandyas, King of Kings :
Look on my works, ye mighty, and despair!

But nothing equals these vast serene faces of the Pharaohs on the great rock-temple of Abou Simbel (Ipsambul) (No. 1, F. 307). It is the sublimest of stereographs, as the temple of Kardasay, this loveliest of views on glass, is the most poetical. But here is the crocodile lying in wait for us on the sandy bank of the Nile, and we must leave Egypt for Syria.

Damascus makes but a poor show, with its squalid houses, and glaring clayed roofs. We always wanted to invest in real estate there in Abraham Street or Noah Place, or some of its well-established thoroughfares, but are discouraged since we have had these views of the old town. Baalbec does better. See the great stones built into the wall there,—the biggest $64 \times 13 \times 13$! What do you think of that?—a single stone bigger than both your parlors thrown into one, and this one of three almost

alike, built into a wall as if just because they happened to be lying round, handy! So, then, we pass on to Bethlehem, looking like a fortress more than a town, all stone and very little window, — to Nazareth, with its brick, oven-like houses, its tall minaret, its cypresses, and the black-mouthed, open tombs, with masses of cactus growing at their edge, — to Jerusalem, — to the Jordan, every drop of whose waters seems to carry a baptismal blessing, — to the Dead Sea, — and to the Cedars of Lebanon. Almost everything may have changed in these hallowed places, except the face of the stream and the lake, and the outlines of hill and valley. But as we look across the city to the Mount of Olives, we know that these lines which run in graceful curves along the horizon are the same that He looked upon as he turned his eyes sadly over Jerusalem. We know that these long declivities, beyond Nazareth, were pictured in the eyes of Mary's growing boy just as they are now ours sitting here by our own firesides.

This is no *toy*, which thus carries us into the

very presence of all that is most inspiring to the soul in the scenes which the world's heroes and martyrs, and more than heroes, more than martyrs, have hallowed and solemnized by looking upon. It is no toy : it is a divine gift, placed in our hands nominally by science, really by that inspiration which is revealing the Almighty through the lips of the humble students of Nature. Look through it once more before laying it down, but not at any earthly sight. In these views, taken through the telescopes of De la Rue of London and of Mr. Rutherford of New York, and that of the Cambridge Observatory by Mr. Whipple of Boston, we see the "spotty globe" of the moon with all its mountains and chasms, its mysterious craters and groove-like valleys. This magnificent stereograph by Mr. Whipple was taken, the first picture February 7th, the second April 6th. In this way the change of position gives the solid effect of the ordinary stereoscopic views, and the sphere rounds itself out so perfectly to the eye that it seems as if we could grasp it like an orange.

If the reader is interested, or like to become interested, in the subject of sun-sculpture and stereoscopes, he may like to know what the last two years have taught us as to the particular instruments best worth owning. We will give a few words to the subject. Of simple instruments, for looking at one slide at a time, Smith and Beck's is the most perfect we have seen, but the most expensive. For looking at paper slides, which are light, an instrument which may be held in the hand is very convenient. We have had one constructed which is better, as we think, than any in the shops. Mr. Joseph L. Bates, 129 Washington Street, has one of them, if any person is curious to see it. In buying the instruments which hold many slides, we should prefer two that hold fifty to one that holds a hundred. Becker's small instrument, containing fifty paper slides, back to back, is the one we like best for these slides, but the top should be arranged so as to come off, — the first change we made in our own after procuring it.

We are allowed to mention the remarkable instrument contrived by our friend Dr. H. J.

Bigelow, for holding fifty glass slides. The spectator looks in : all is darkness. He turns a crank : the gray dawn of morning steals over some beautiful scene, or the *façade* of a stately temple. Still, as he turns, the morning brightens through various tints of rose and purple, until it reaches the golden richness of high noon. Still turning, all at once night shuts down upon the picture as at a tropical sunset, suddenly, without blur or gradual dimness, — the sun of the picture going down,

“Not as in Northern climes obscurely bright,
But one unclouded blaze of living light.”

We have not thanked the many friendly dealers in these pictures, who have sent us heaps and hundreds of stereographs to look over and select from, only because they are too many to thank. Nor do we place any price on this advertisement of their most interesting branch of business. But there are a few stereographs we wish some of them would send us, with the bill for the same ; such as Antwerp and Strasbourg Cathedrals, — Bologna, with its brick towers, — the Lions of Mycenæ, if they are to

be had, — the Walls of Fiesole, — the Golden Candlestick in the Arch of Titus, — and others which we can mention, if consulted ; some of which we have hunted for a long time in vain. But we write principally to wake up an interest in a new and inexhaustible source of pleasure, and only regret that the many pages we have filled can do no more than hint the infinite resources which the new art has laid open to us all.

DOINGS OF THE SUNBEAM.

FEW of those who seek a photographer's establishment to have their portraits taken know at all into what a vast branch of commerce this business of sun-picturing has grown. We took occasion lately to visit one of the principal establishments in the country, that of Messrs. E. & H. T. Anthony, in Broadway, New York. We had made the acquaintance of these gentlemen through the remarkably instantaneous stereoscopic views published by them, and of which we spoke in a former article in terms which some might think extravagant. Our unsolicited commendation of these marvellous pictures insured us a more than polite reception. Every detail of the branches of the photographic business to which they are more especially devoted was freely

shown us, and "No Admittance" over the doors of their inmost sanctuaries came to mean for us, "Walk in ; you are heartily welcome."

We should be glad to tell our readers of all that we saw in the two establishments of theirs which we visited, but this would take the whole space which we must distribute among several subdivisions of a subject that offers many points of interest. We must confine ourselves to a few glimpses and sketches.

The guests of the neighboring hotels, as they dally with their morning's omelet, little imagine what varied uses come out of the shells which furnished them their anticipatory repast of disappointed chickens. If they had visited Mr. Anthony's upper rooms, they would have seen a row of young women before certain broad, shallow pans filled with the glairy albumen which once enveloped those potential fowls.

The one next us takes a large sheet of photographic paper (a paper made in Europe for this special purpose, very thin, smooth, and compact), and floats it evenly on the surface

of the albumen. Presently she lifts it very carefully by the turned-up corners and hangs it *bias*, as a seamstress might say, that is, cornerwise, on a string, to dry. This "albumenized" paper is sold most extensively to photographers, who find it cheaper to buy than to prepare it. It keeps for a long time uninjured, and is "sensitized" when wanted, as we shall see by and by.

The amount of photographic paper which is annually imported from France and Germany has been estimated at fifteen thousand reams. Ten thousand native partlets —

"Sic vos non vobis nificatis, aves" —

cackle over the promise of their inchoate offspring, doomed to perish unfeathered, before fate has decided whether they shall cluck or crow, for the sole use of the minions of the sun and the feeders of the caravanseras.

In another portion of the same establishment are great collections of the chemical substances used in photography. To give an idea of the scale on which these are required, we may

state that the estimate of the annual consumption of the precious metals for photographic purposes, in this country, is set down at ten tons for silver and half a ton for gold. Vast quantities of the hyposulphite of soda, which, we shall see, plays an important part in the process of preparing the negative plate and finishing the positive print, are also demanded.

In another building, provided with steam-power, which performs much of the labor, is carried on the great work of manufacturing photographic albums, cases for portraits, parts of cameras, and of printing pictures from negatives. Many of these branches of work are very interesting. The luxurious album, embossed, clasped, gilded, resplendent as a tropical butterfly, goes through as many transformations as a "purple emperor." It begins a paste-board larva, is swathed and pressed and glued into the condition of a chrysalis, and at last alights on the centre-table gorgeous in gold and velvet, the perfect *imago*. The cases for portraits are made in lengths, and cut up, somewhat as they say ships are built in Maine, a

mile at a time, to be afterwards sawed across so as to become sloops, schooners, or such other sized craft as may happen to be wanted.

Each single process in the manufacture of elaborate products of skill oftentimes seems and is very simple. The workmen in large establishments, where labor is greatly subdivided, become wonderfully adroit in doing a fraction of something. They always remind us of the Chinese or the old Egyptians. A young person who mounts photographs on cards all day long confessed to having never, or almost never, seen a negative developed, though standing at the time within a few feet of the dark closet where the process was going on all day long. One forlorn individual will perhaps pass his days in the single work of cleaning the glass plates for negatives. Almost at his elbow is a toning bath, but he would think it a good joke, if you asked him whether a picture had lain long enough in the solution of gold or hyposulphite.

We always take a glance at the literature which is certain to adorn the walls in the neighborhood of each operative's bench or place for

work. Our friends in the manufactory we are speaking of were not wanting in this respect. One of the girls had pasted on the wall before her,

"Kind words can never die."

It would not have been easy to give her a harsh one after reading her chosen maxim. "The Moment of Parting" was twice noticed. "The Haunted Spring," "Dearest May," "The *Bony* Boat," "Yankee Girls," "Yankee Ship and Yankee Crew," "My Country, 't is of thee," and — was there ever anybody that ever broke up prose into lengths who would not look to see if there were not a copy of some performance of his own on the wall he was examining, if he were exploring the inner chamber of a freshly opened pyramid?

We left the great manufacturing establishment of the Messrs. Anthony, more than ever impressed with the vast accession of happiness conferred upon mankind by this art, which has spread itself as widely as civilization. The photographer can procure every article needed for his work at moderate cost and in quan-

tities suited to his wants. His prices have consequently come down to such a point that pauperism itself need hardly shrink from the outlay required for a family portrait-gallery. The "tin-types," as the small miniatures are called, — stannotypes would be the proper name, — are furnished at the rate of *two cents* each! A portrait such as Isabey could not paint for a Marshal of France, a likeness such as Malbone could not make of a President's lady, to be had for two coppers, — a dozen *chefs d'œuvre* for a quarter of a dollar.

We had been for a long time meditating a devotion of a part of what is left of our more or less youthful energies to acquiring practical knowledge of the photographic art. The auspicious moment came at last, and we entered ourselves as the temporary apprentice of Mr. J. W. Black of this city, well known as a most skilful photographer and a friendly assistant of beginners in the art.

We consider ourselves at this present time competent to set up a photographic ambulance or to hang out a sign in any modest country

town. We should, no doubt, over-time and under-tone, and otherwise wrong the countenances of some of our sitters; but we should get the knack in a week or two, and if Baron Wenzel owned to having spoiled a hatful of eyes before he had fairly learned how to operate for cataract, we need not think too much of libelling a few village physiognomies before considering ourselves fit to take the minister and his deacons. After years of practice there is always something to learn, but every one is surprised to find how little time is required for the acquisition of skill enough to make a passable negative and print a tolerable picture. We could not help learning, with the aid that was afforded us by Mr. Black and his assistants, who were all so very courteous and pleasant, that, as a token of gratitude, we offered to take photographs of any of them who would sit to us for that purpose. Every stage of the process, from preparing a plate to mounting a finished sun-print, we have taught our hands to perform, and can therefore speak with a certain authority to those who wish to learn the way of working with the sunbeam.

Notwithstanding the fact that the process of making a photographic picture is detailed in a great many books, — nay, although we have given a brief account of the principal stages of it in one of our former articles, we are going to take the reader into the sanctuary of the art with us, and ask him to assist, in the French sense of the word, while we make a photograph, — say, rather, while the mysterious forces which we place in condition to act work that miracle for us.

We are in a room lighted through a roof of ground glass, its walls covered with blue paper to avoid reflection. A camera mounted on an adjustable stand is before us. We will fasten this picture, which we are going to copy, against the wall. Now we will place the camera opposite to it, and bring it into focus so as to give a clear image on the square of ground glass in the interior of the instrument. If the image is too large, we push the camera back ; if too small, push it up towards the picture and focus again. The image is wrong side up, as we see ; but if we take the trouble to reverse the picture we

are copying, it will appear in its proper position in the camera. Having got an image of the right size, and perfectly sharp, we will prepare a sensitive plate, which shall be placed exactly where the ground glass now is, so that this same image shall be printed on it.

For this purpose we must quit the warm precincts of the cheerful day, and go into the narrow den where the deeds of darkness are done. Its dimensions are of the smallest, and its aspect of the rudest. A feeble yellow flame from a gas-light is all that illuminates it. All round us are troughs and bottles and water-pipes, and ill-conditioned utensils of various kinds. Everything is blackened with nitrate of silver; every form of spot, of streak, of splash, of spatter, of stain, is to be seen upon the floor, the walls, the shelves, the vessels. Leave all linen behind you, ye who enter here, or at least protect it at every exposed point. Cover your hands in gauntlets of India-rubber, if you would not utter Lady Macbeth's soliloquy over them when they come to the light of day. Defend the nether garments with overalls, such as plain artisans

are wont to wear. Button the ancient coat over the candid shirt-front, and hold up the retracted wristbands by elastic bands around the shirt-sleeve above the elbow. Conscience and nitrate of silver are telltales that never forget any tampering with them, and the broader the light the darker their record. Now to our work.

Here is a square of crown glass three fourths as large as a page of the "Atlantic Monthly," if you happen to know that periodical. Let us brush it carefully, that its surface may be free from dust. Now we take hold of it by the upper left-hand corner and pour some of this thin syrup-like fluid upon it, inclining the plate gently from side to side, so that it may spread evenly over the surface, and let the superfluous fluid drain back from the right-hand upper corner into the bottle. We keep the plate rocking from side to side, so as to prevent the fluid running in lines, as it has a tendency to do. The neglect of this precaution is evident in some otherwise excellent photographs; we notice it, for instance, in Frith's *Abou Simbel*, No. 1, the magnificent rock-temple façade. In less than a

minute the syrupy fluid has dried, and appears like a film of transparent varnish on the glass plate. We now place it on a flat double hook of gutta-percha, and lower it gently into the nitrate-of-silver bath. As it must remain there three or four minutes, we will pass away the time in explaining what has been already done.

The syrupy fluid was *iodized collodion*. This is made by dissolving gun-cotton in ether with alcohol, and adding some iodide of ammonium. When a thin layer of this fluid is poured on the glass plate, the ether and alcohol evaporate very speedily, and leave a closely adherent film of organic matter derived from the cotton, and containing iodide of ammonium. We have plunged this into the bath, which contains chiefly nitrate of silver, but also some iodide of silver, — knowing that a decomposition will take place, in consequence of which the iodide of ammonium will become changed to the iodide of silver, which will now fill the pores of the collodion film. The iodide of silver is eminently sensitive to light. The use of the collodion is to furnish a delicate, homogeneous,

adhesive, colorless layer in which the iodide may be deposited. Its organic nature may favor the action of light upon the iodide of silver.

While we have been talking and waiting, the process just described has been going on, and we are now ready to take the glass plate out of the nitrate-of-silver bath. It is wholly changed in aspect. The film has become in appearance like a boiled white of egg, so that the glass produces rather the effect of porcelain, as we look at it. Open no door now! Let in no glimpse of day, or the charm is broken in an instant! No Sultana was ever veiled from the light of heaven as this milky tablet we hold must be. But we must carry it to the camera which stands waiting for it in the blaze of high noon. To do this, we first carefully place it in this narrow case, called a *shield*, where it lies safe in utter darkness. We now carry it to the camera, and, having removed the ground glass on which the camera-picture had been brought to an exact focus, we drop the shield containing the sensitive plate into the groove the glass

occupied. Then we pull out a slide, as the blanket is taken from a horse before he starts. There is nothing now but to remove the brass cap from the lens. That is giving the word Go! It is a tremulous moment for the beginner.

As we lift the brass cap, we begin to count seconds, — by a watch, if we are naturally unrhythmical, — by the pulsations in our souls, if we have an intellectual pendulum and escapement. Most persons can keep tolerably even time with a second-hand while it is traversing its circle. The light is pretty good at this time, and we count only as far as thirty, when we cover the lens again with the cap. Then we replace the slide in the shield, draw this out of the camera, and carry it back into the shadowy realm where Cocytus flows in black nitrate of silver and Acheron stagnates in the pool of hyposulphite, and invisible ghosts, trooping down from the world of day, cross a Styx of dissolved sulphate of iron, and appear before the Rhadamanthus of that lurid Hades.

Such a ghost we hold imprisoned in the shield

we have just brought from the camera. We open it, and find our milky-surfaced glass plate looking exactly as it did when we placed it in the shield. No eye, no microscope, can detect a trace of change in the white film that is spread over it. And yet there is a potential image in it, — a latent soul, which will presently appear before its judge. This is the Stygian stream, — this solution of protosulphate of iron, with which we will presently flood the white surface.

We pour on the solution. There is no change at first; the fluid flows over the whole surface as harmless and as useless as if it were water. What if there were no picture there? Stop! what is that change of color beginning at this edge, and spreading as a blush spreads over a girl's cheek? It is a border, like that round the picture, and then dawns the outline of a head, and now the eyes come out from the blank as stars from the empty sky, and the lineaments define themselves, plainly enough, yet in a strange aspect, — for where there was light in the picture we have shadow, and where there was shadow we have light. But while we look

it seems to fade again, as if it would disappear. Have no fear of that; it is only deepening its shadows. Now we place it under the running water which we have always at hand. We hold it up before the dull-red gas-light, and then we see that every line of the original and the artist's name are reproduced as sharply as if the fairies had engraved them for us. The picture is perfect of its kind, only it seems to want a little more force. That we can easily get by the simple process called "intensifying" or "redeveloping." We mix a solution of nitrate of silver and of pyrogallic acid in about equal quantities, and pour it upon the pictured film and back again into the vessel, repeating this with the same portion of fluid several times. Presently the fluid grows brownish, and at the same time the whole picture gains the depth of shadow in its darker parts which we desire. Again we place it under the running water. When it is well washed, we plunge it into this bath of hyposulphite of soda, which removes all the iodide of silver, leaving only the dark metal impregnating the film. After it has remained

there a few minutes, we take it out and wash it again as before, under the running stream of water. Then we dry it, and when it is dry, pour varnish over it, dry that, and it is done. This is a *negative*, — not a true picture, but a reversed picture, which puts darkness for light and light for darkness. From this we can take true pictures, or *positives*.

Let us now proceed to take one of these pictures. In a small room, lighted by a few rays which filter through a yellow curtain, a youth has been employed all the morning in developing the sensitive conscience of certain sheets of paper, which came to him from the manufacturer already glazed by having been floated upon the white of eggs and carefully dried, as previously described. This “albumenized” paper the youth lays gently and skilfully upon the surface of a solution of nitrate of silver. When it has floated there a few minutes, he lifts it, lets it drain, and hangs it by one corner to dry. This “sensitized” paper is served fresh every morning, as it loses its delicacy by keeping.

We take a piece of this paper of the proper size, and lay it on the varnished or pictured side of the negative, which is itself laid in a wooden frame, like a picture-frame. Then we place a thick piece of cloth on the paper. Then we lay a hinged wooden back on the cloth, and by means of two brass springs press all close together,—the wooden back against the cloth, the cloth against the paper, the paper against the negative. We turn the frame over, and see that the plain side of the glass negative is clean. And now we step out upon the roof of the house into the bright sunshine, and lay the frame, with the glass uppermost, in the full blaze of light. For a very little while we can see the paper darkening through the negative, but presently it clouds so much that its further changes cannot be recognized. When we think it has darkened nearly enough, we turn it over, open a part of the hinged back, turn down first a portion of the thick cloth, and then enough of the paper to see something of the forming picture. If not printed dark enough as yet, we turn back to their places successively the pic-

ture, the cloth, the opened part of the frame, and lay it again in the sun. It is just like cooking: the sun is the fire, and the picture is the cake; when it is browned exactly to the right point, we take it off the fire. A photograph-printer will have fifty or more pictures printing at once, and he keeps going up and down the line, opening the frames to look and see how they are getting on. As fast as they are done, he turns them over, back to the sun, and the cooking process stops at once.

The pictures which have just been printed in the sunshine are of a peculiar purple tint, and still sensitive to the light, which will first "flatten them out," and finally darken the whole paper, if they are exposed to it before the series of processes which "fixes" and "tones" them. They are kept shaded, therefore, until a batch is ready to go down to the toning-room.

When they reach that part of the establishment, the first thing that is done with them is to throw them face down upon the surface of a salt bath. Their purple changes at once to a dull red. They are then washed in clean water

for a few minutes, and after that laid, face up, in a solution of chloride of gold with a salt of soda. Here they must lie for some minutes at least; for the change, which we can watch by the scanty daylight admitted, goes on slowly. Gradually they turn to a darker shade; the reddish tint becomes lilac, purple, brown, of somewhat different tints in different cases. When the process seems to have gone far enough, the picture is thrown into a bath containing hyposulphite of soda, which dissolves the superfluous, unstable compounds, and rapidly clears up the lighter portion of the picture. On being removed from this, it is thoroughly washed, dried, and mounted, by pasting it with starch or dextrine to a card of the proper size.

The reader who has followed the details of the process may like to know what are the common difficulties the beginner meets with.

The first is in coating the glass with collodion. It takes some practice to learn to do this neatly and uniformly.

The second is in timing the immersion in the nitrate-of-silver bath. This is easily overcome;

the glass may be examined by the feeble lamp-light at the end of two or three minutes, and, if the surface looks streaky, replunged in the bath for a minute or two more, or until the surface looks smooth.

The third is in getting an exact focus in the camera, which wants good eyes, or strong glasses for poor ones.

The fourth is in timing the exposure. This is the most delicate of all the processes. Experience alone can teach the time required with different objects in different lights. Here are four card-portraits from a negative taken from one of Barry's crayon-pictures, illustrating an experiment which will prove very useful to the beginner. The negative of No. 1 was exposed only two seconds. The young lady's face is very dusky on a very dusky ground. The lights have hardly come out at all. No. 2 was exposed five seconds. Undertimed, but much cleared up. No. 3 was exposed fifteen seconds, about the proper time. It is the best of the series, but the negative ought to have been intensified. It looks as if Miss E. V. had washed her face

since the five-seconds picture was taken. No. 4 was exposed sixty seconds, that is to say, three or four times too long. It has a curious resemblance to No. 1, but is less dusky. The contrasts of light and shade which gave life to No. 3 have disappeared, and the face looks as if a second application of soap would improve it. A few trials of this kind will teach the eye to recognize the appearances of under and over-exposure, so that, if the first negative proves to have been too long or too short a time in the camera, the proper period of exposure for the next may be pretty easily determined.

The printing from the negative is less difficult, because we can examine the picture as often as we choose; but it may be well to undertake and overtime some pictures, for the sake of a lesson like that taught by the series of pictures from the four negatives.

The only other point likely to prove difficult is the toning in the gold bath. As the picture can be watched, however, a very little practice will enable us to recognize the shade which indicates that this part of the process is finished.

We have copied a picture, but we can take a portrait from Nature just as easily, except for a little more trouble in adjusting the position and managing the light. So easy is it to reproduce the faces that we love to look upon; so simple is that marvellous work by which we preserve the first smile of infancy and the last look of age; the most precious gift Art ever bestowed upon love and friendship!

It will be observed that the glass plate, covered with its film of collodion, was removed directly from the nitrate-of-silver bath to the camera, so as to be exposed to its image while still wet. It is obvious that this process is one that can hardly be performed conveniently at a distance from the artist's place of work. Solutions of nitrate of silver are not carried about and decanted into baths and back again into bottles without tracking their path on persons and things. The *photophobia* of the "sensitized" plate, of course, requires a dark apartment of some kind: commonly a folding tent is made to answer the purpose in photographic excursions. It becomes, therefore, a serious

matter to transport all that is required to make a negative according to the method described. It has consequently been a great desideratum to find some way of preparing a sensitive plate which could be dried and laid away, retaining its sensitive quality for days or weeks, until wanted. The artist would then have to take with him nothing but his camera and his dry sensitive plates. After exposing these in the camera, they would be kept in dark boxes until he was ready to develop them at leisure on returning to his *atelier*.

Many "dry methods" have been contrived, of which the *tannin process* is in most favor. The plate, after being "sensitized" and washed, is plunged in a bath containing ten grains of tannin to an ounce of water. It is then dried, and may be kept for a long time without losing its sensitive quality. It is placed dry in the camera, and developed by wetting it and then pouring over it a mixture of pyrogallic acid and the solution of nitrate of silver. Amateurs find this the best way of taking scenery, and produce admirable pictures by it, as we shall mention by and by.

In our former articles we have spoken principally of stereoscopic pictures. These are still our chief favorites for scenery, for architectural objects, for almost everything but portraits, — and even these last acquire a reality in the stereoscope which they can get in no other way. In this third photographic excursion we must only touch briefly upon the stereograph. Yet we have something to add to what we said before on this topic.

One of the most interesting accessions to our collection is a series of twelve views, on glass, of scenes and objects in California, sent us with unprovoked liberality by the artist, Mr. Watkins. As specimens of art they are admirable, and some of the subjects are among the most interesting to be found in the whole realm of Nature. Thus, the great tree, the “Grizzly Giant,” of Mariposa, is shown in two admirable views; the mighty precipice of El Capitan, more than three thousand feet in precipitous height, — the three conical hill-tops of Yo Semite, taken, not as they soar into the atmosphere, but as they are reflected in the calm waters be-

low, — these and others are shown, clear, yet soft, vigorous in the foreground, delicately distinct in the distance, in a perfection of art which compares with the finest European work.

The “London Stereoscopic Company” has produced some very beautiful paper stereographs, very dear, but worth their cost, of the Great Exhibition. There is one view, which we are fortunate enough to possess, that is a marvel of living detail, — one of the series showing the opening ceremonies. The picture gives principally the musicians. By careful counting, we find there are *six hundred faces to the square inch* in the more crowded portion of the scene which the view embraces, — a part occupied by the female singers. These singers are all clad in white, and packed with great compression of crinoline, — if that, indeed, were worn on the occasion. Mere points as their faces seem to the naked eye, the stereoscope, and still more a strong magnifier, shows them with their mouths all open as they join in the chorus, and with such distinctness that some of them might readily be recognized by those fa-

miliar with their aspect. This, it is to be remembered, is not a reduced stereograph for the microscope, but a common one, taken as we see them taken constantly.

We find in the same series several very good views of Gibson's famous colored "Venus," a lady with a pleasant face and a very pretty pair of shoulders. But the grand "Cleopatra" of our countryman, Mr. Story, of which we have heard so much, was not to be had, — why not we cannot say, for a stereograph of it would have had an immense success in America, and doubtless everywhere.

The London Stereoscopic Company has also furnished us with views of Paris, many of them instantaneous, far in advance of the earlier ones of Parisian origin. Our darling little church of St. Etienne du Mont, for instance, with its staircase and screen of stone embroidery, its carved oaken pulpit borne on the back of a carved oaken Samson, its old monuments, its stained windows, is brought back to us in all its minute detail as we remember it in many a visit made on our way back from the morning's work at

La Pitié to the late breakfast at the Café Procope. Some of the instantaneous views are of great perfection, and carry us as fairly upon the Boulevards as Mr. Anthony transports us to Broadway. With the exception of this series, we have found very few new stereoscopic pictures in the market for the last year or two. This is not so much owing to the increased expense of importing foreign views as to the greater popularity of *card-portraits*, which, as everybody knows, have become the social currency, the sentimental "Green-backs" of civilization, within a very recent period.

We, who have exhausted our terms of admiration in describing the stereoscopic picture, will not quarrel with the common taste which prefers the card-portrait. The last is the cheapest, the most portable, requires no machine to look at it with, can be seen by several persons at the same time,—in short, has all the popular elements. Many care little for the wonders of the world brought before their eyes by the stereoscope; all love to see the faces of their friends. Jonathan does not think a great deal

of the Venus of Milo, but falls into raptures over a card-portrait of his Jerusha. So far from finding fault with him, we rejoice rather that his affections and those of average mortality are better developed than their taste ; and lost as we sometimes are in contemplation of the shadowy masks of ugliness which hang in the frames of the photographers, as the skins of beasts are stretched upon tanners' fences, we still feel grateful, when we remember the days of itinerant portrait-painters, that the indignities of Nature are no longer intensified by the outrages of Art.

The sitters who throng the photographer's establishment are a curious study. They are of all ages, from the babe in arms to the old wrinkled patriarchs and dames whose smiles have as many furrows as an ancient elm has rings that count its summers. The sun is a Rembrandt in his way, and loves to track all the lines in these old splintered faces. A photograph of one of them is like one of those fossilized sea-beaches where the rain-drops have left their marks, and the shell-fish the grooves

in which they crawled, and the wading birds the divergent lines of their footprints, — tears, cares, griefs, once vanishing as impressions from the sand, now fixed as the vestiges in the sandstone.

Attitudes, dresses, features, hands, feet, betray the social grade of the candidates for portraiture. The picture tells no lie about them. There is no use in their putting on airs; the make-believe gentleman and lady cannot look like the genuine article. Mediocrity shows itself for what it is worth, no matter what temporary name it may have acquired. Ill-temper cannot hide itself under the simper of assumed amiability. The querulousness of incompetent complaining natures confesses itself almost as much as in the tones of the voice. The anxiety which strives to smooth its forehead cannot get rid of the telltale furrow. The weakness which belongs to the infirm of purpose and vacuous of thought is hardly to be disguised, even though the moustache is allowed to hide *the centre of expression*.

All parts of a face doubtless have their fixed

relations to each other and to the character of the person to whom the face belongs. But there is one feature, and especially one part of that feature, which more than any other facial sign reveals the nature of the individual. The feature is *the mouth*, and the portion of it referred to is *the corner*. A circle of half an inch radius, having its centre at the junction of the two lips, will include the chief focus of expression.

This will be easily understood, if we reflect that here is the point where more muscles of expression converge than at any other. From above comes the elevator of the angle of the mouth ; from the region of the cheek-bone slant downwards the two *zygomatrics*, which carry the angle outwards and upwards ; from behind comes the *buccinator*, or trumpeter's muscle, which simply widens the mouth by drawing the corners straight outward ; from below, the depressor of the angle ; not to add a seventh, sometimes well marked, — the “laughing muscle” of Santorini. Within the narrow circle where these muscles meet the ring of muscular fibres surrounding the mouth the battles of the soul record their

varying fortunes and results. This is the "*nœud vital*," — to borrow Flourens's expression with reference to a nervous centre, — the *vital knot* of expression. Here we may read the victories and defeats, the force, the weakness, the hardness, the sweetness of a character. Here is the nest of that feeble fowl, self-consciousness, whose brood strays at large over all the features.

If you wish to see the very look your friend wore when his portrait was taken, let not the finishing artist's pencil intrude within the circle of the vital knot of expression.

We have learned many curious facts from photographic portraits which we were slow to learn from faces. One is the great number of aspects belonging to each countenance with which we are familiar. Sometimes, in looking at a portrait, it seems to us that this is just the face we know, and that it is always thus. But again another view shows us a wholly different aspect, which is yet as absolutely characteristic as the first; and a third and a fourth convince us that our friend was not one, but many, in outward appearance, as in the mental and

emotional shapes by which his inner nature made itself known to us.

Another point which must have struck everybody who has studied photographic portraits is the family likeness that shows itself throughout a whole wide connection. We notice it more readily than in life, from the fact that we bring many of these family portraits together, and study them more at our ease. There is something in the face that corresponds to *tone* in the voice, — recognizable, not capable of description ; and this kind of resemblance in the faces of kindred we may observe, though the features are unlike. But the features themselves are wonderfully tenacious of their old patterns. The Prince of Wales is getting to look like George III. We noticed it when he was in this country ; we see it more plainly in his recent photographs. Governor Endicott's features have come straight down to some of his descendants in the present day. There is a dimpled chin which runs through one family connection we have studied, and a certain form of lip which belongs to another. As our *cheval de bataille*

stands ready saddled and bridled for us just now, we must indulge ourselves in mounting him for a brief excursion. This is a story we have told so often that we should begin to doubt it but for the fact that we have before us the written statement of the person who was its subject. His professor, who did not know his name or anything about him, stopped him one day after lecture and asked him if he was not a relation of Mr. —, a person of some note in Essex County. — Not that he had ever heard of. — The professor thought he must be, — would he inquire? — Two or three days afterwards, having made inquiries at his home in Middlesex County, he reported that an elder member of the family informed him that Mr. —'s great-grandfather on his mother's side and his own great-grandfather on his father's side were own cousins. The whole class of facts, of which this seems to us too singular an instance to be lost, is forcing itself into notice, with new strength of evidence, through the galleries of photographic family portraits which are making everywhere.

In the course of a certain number of years there will have been developed some new physiological results, which will prove of extreme interest to the physiologist and the moralist. They will take time ; for, to bring some of them out fully, a generation must be followed from its cradle to its grave.

The first will be derived from a precise study of the effects of age upon the features. Many series of portraits taken at short intervals through life, studied carefully side by side, will probably show to some acute observer that Nature is very exact in the tallies that mark the years of human life.

The second is to result from a course of investigations which we would rather indicate than follow out ; for, if the student of it did not fear the fate of Phalaris, — that he should find himself condemned as unlifeworthy upon the basis of his own observations, — he would very certainly become the object of eternal hatred to the proprietors of all the semi-organizations which he felt obliged to condemn. It consists in the study of the laws of physical

degeneration, — the stages and manifestations of the process by which Nature dismantles the complete and typical human organism, until it becomes too bad for her own sufferance, and she kills it off before the advent of the reproductive period, that it may not permanently depress her average of vital force by taking part in the life of the race. There are many signs that fall far short of the marks of cretinism, — yet just as plain as that is to the *visus eruditus*, — which one meets every hour of the day in every circle of society. Many of these are partial arrests of development. We do not care to mention all which we think may be recognized, but there is one which we need not hesitate to speak of from the fact that it is so exceedingly common.

The vertical part of the lower jaw is short, and the angle of the jaw is obtuse, in infancy. When the organizing force is abundant, the lower jaw, which, as the active partner in the business of mastication, must be developed in proportion to the vigor of the nutritive apparatus, comes down by a rapid growth which gives the straight-cut posterior line and the bold

right angle so familiar to us in the portraits of pugilists, exaggerated by the caricaturists in their faces of fighting men, and noticeable in well-developed persons of all classes. But in imperfectly grown adults the jaw retains the infantile character, — the short vertical portion necessarily implying the obtuse angle. The upper jaw at the same time fails to expand laterally: in vigorous organisms it spreads out boldly, and the teeth stand square and with space enough; whereas in subvitalized persons it remains narrow, as in the child, so that the large front teeth are crowded, and slanted forward, or thrown out of line. This want of lateral expansion is frequently seen in the jaws, upper and lower, of the American, and has been considered a common cause of caries of the teeth.

A third series of results will relate to the effect of character in moulding the features. Go through a “rogues’ gallery” and observe what the faces of the most hardened villains have in common. All these villanous looks have been shaped out of the unmeaning lineaments of in-

fancy. The police-officers know well enough the expression of habitual crime. Now, if all this series of faces had been carefully studied in photographs from the days of innocence to those of confirmed guilt, there is no doubt that a keen eye might recognize, we will not say the first evil volition in the change it wrought upon the face, nor each successive stage in the downward process of the falling nature, but epochs and eras, with differential marks, as palpable perhaps as those which separate the aspects of the successive decades of life. And what is far pleasanter, when the character of a neglected and vitiated child is raised by wise culture, the converse change will be found — nay, has been found — to record itself unmistakably upon the faithful page of the countenance ; so that charitable institutions have learned that their strongest appeal lies in the request, “Look on this picture, and on that,” — the lawless boy at his entrance, and the decent youth at his dismissal.

The field of photography is extending itself to embrace subjects of strange and sometimes of fearful interest. We have referred in a former

article to a stereograph in a friend's collection showing the bodies of the slain heaped up for burial after the Battle of Melegnano. We have now before us a series of photographs showing the field of Antietam and the surrounding country, as they appeared after the great battle of the 17th of September. These terrible mementos of one of the most sanguinary conflicts of the war we owe to the enterprise of Mr. Brady of New York. We ourselves were on the field upon the Sunday following the Wednesday when the battle took place. It is not, however, for us to bear witness to the fidelity of views which the truthful sunbeam has delineated in all their dread reality. The photographs bear witness to the accuracy of some of our own sketches in a paper published in the "Atlantic Monthly" for December, 1862. The "ditch" is figured, still encumbered with the dead, and strewn, as we saw it and the neighboring fields, with fragments and tatters. The "colonel's gray horse" is given in another picture, just as we saw him lying.

Let him who wishes to know what war is

look at this series of illustrations. These wrecks of manhood, thrown together in careless heaps or ranged in ghastly rows for burial, were alive but yesterday. How dear to their little circles far away, most of them!—how little cared for here by the tired party whose office it is to consign them to the earth! An officer may here and there be recognized; but for the rest,—if enemies, they will be counted, and that is all. “80 Rebels are buried in this hole” was one of the epitaphs we read and recorded. Many people would not look through this series. Many, having seen it and dreamed of its horrors, would lock it up in some secret drawer, that it might not thrill or revolt those whose soul sickens at such sights. It was so nearly like visiting the battle-field to look over these views, that all the emotions excited by the actual sight of the stained and sordid scene, strewn with rags and wrecks, came back to us, and we buried them in the recesses of our cabinet as we would have buried the mutilated remains of the dead they too vividly represented. Yet war and battles should have truth for their delineation.

tor. It is well enough for some Baron Gros or Horace Vernet to please an imperial master with fanciful portraits of what they are supposed to be. The honest sunshine

“Is Nature’s sternest painter, yet the best”;

and that gives us, even without the crimson coloring which flows over the recent picture, some conception of what a repulsive, brutal, sickening, hideous thing it is, this dashing together of two frantic mobs to which we give the name of armies. The end to be attained justifies the means, we are willing to believe; but the sight of these pictures is a commentary on civilization such as a savage might well triumph to show its missionaries. Yet through such martyrdom must come our redemption. War is the surgery of crime. Bad as it is in itself, it always implies that something worse has gone before. Where is the American, worthy of his privileges, who does not now recognize the fact, if never until now, that the disease of our nation was organic, not functional, calling for the knife, and not for washes and anodynes?

It is a relief to soar away from the contemplation of these sad scenes, and fly in the balloon which carried Messrs. King and Black in their aerial photographic excursion. Our townsman, Dr. John Jeffries, as is well recollected, was one of the first to tempt the perilous heights of the atmosphere, and the first who ever performed a journey through the air of any considerable extent. We believe this attempt of our younger townsmen to be the earliest in which the aeronaut has sought to work the two miracles at once, of rising against the force of gravity, and picturing the face of the earth beneath him without brush or pencil.

One of their photographs is lying before us. Boston, as the eagle and the wild goose see it, is a very different object from the same place as the solid citizen looks up at its eaves and chimneys. The Old South and Trinity Church are two landmarks not to be mistaken. Washington Street slants across the picture as a narrow cleft. Milk Street winds as if the cowpath which gave it a name had been followed by the builders of its commercial palaces. Windows,

chimneys, and skylights attract the eye in the central parts of the view, exquisitely defined, bewildering in numbers. Towards the circumference it grows darker, becoming clouded and confused, and at one end a black expanse of waveless water is whitened by the nebulous outline of flitting sails. As a first attempt, it is on the whole a remarkable success; but its greatest interest is in showing what we may hope to see accomplished in the same direction.

While the aeronaut is looking at our planet from the vault of heaven where he hangs suspended, and seizing the image of the scene beneath him as he flies, the astronomer is causing the heavenly bodies to print their images on the sensitive sheet he spreads under the rays concentrated by his telescope. We have formerly taken occasion to speak of the wonderful stereoscopic figures of the moon taken by Mr. De la Rue in England, by Mr. Rutherford and by Mr. Whipple in this country. To these most successful experiments must be added that of Dr. Henry Draper, who has constructed a reflecting telescope, with the largest silver reflector in the

world, except that of the Imperial Observatory at Paris, for the special purpose of celestial photography. The reflectors made by Dr. Draper "will show Debilissima quadruple, and easily bring out the companion of Sirius or the sixth star in the trapezium of Orion." In taking photographs from these mirrors, a movement of the sensitive plate of only one hundredth of an inch will render the image perceptibly less sharp. It was this accuracy of convergence of the light which led Dr. Draper to prefer the mirror to the achromatic lens. He has taken almost all the daily phases of the moon, from the sixth to the twenty-seventh day, using mostly some of Mr. Anthony's quick collodion, and has repeatedly obtained the full moon by means of it in *one third of a second*.

In the last "Annual of Scientific Discovery" are interesting notices of photographs of the sun, showing the spots on his disk, of Jupiter with his belts, and Saturn with his ring.

While the astronomer has been reducing the heavenly bodies to the dimensions of his stereoscopic slide, the anatomist has been lifting the

invisible by the aid of his microscope into palpable dimensions, to remain permanently recorded in the handwriting of the sun himself. Eighteen years ago, M. Donné published in Paris a series of plates executed after figures obtained by the process of Daguerre. These, which we have long employed in teaching, give some pretty good views of various organic elements, but do not attempt to reproduce any of the tissues. Professor O. N. Rood, of Troy, has sent us some most interesting photographs, showing the markings of infusoria enormously magnified and perfectly defined. In a stereograph sent us by the same gentleman the epithelium scales from mucous membrane are shown floating or half submerged in fluid, — a very curious effect, requiring the double image to produce it. Of all the microphotographs we have seen, those made by Dr. John Dean, of Boston, from his own sections of the spinal cord, are the most remarkable for the light they throw on the minute structure of the body. The sections made by Dr. Dean are in themselves very beautiful specimens, and have formed

the basis of a communication to the American Academy of Arts and Sciences, in which many new observations have been added to our knowledge of this most complicated structure. But figures drawn from images seen in the field of the microscope have too often been known to borrow a good deal from the imagination of the beholder. Some objects are so complex that they defy the most cunning hand to render them with all their features. When the enlarged image is suffered to delineate itself, as in Dr. Dean's views of the *medulla oblongata*, there is no room to question the exactness of the portraiture, and the distant student is able to form his own opinion as well as the original observer. These later achievements of Dr. Dean have excited much attention here and in Europe, and point to a new epoch of anatomical and physiological delineation.

The reversed method of microscopic photography is that which gives portraits and documents in little. The best specimen of this kind we have obtained is another of those miracles which recall the wonders of Arabian fiction.

On a slip of glass, three inches long by one broad, is a circle of thinner glass, as large as a ten-cent piece. In the centre of this is a speck, as if a fly had stepped there without scraping his foot before setting it down. On putting this under a microscope magnifying fifty diameters there come into view the Declaration of Independence in full, in a clear, bold type, every name signed in fac-simile ; the arms of all the States, easily made out, and well finished ; with good portraits of all the Presidents down to a recent date. Any person familiar with their faces would recognize any one of these portraits in a moment.

Still another application of photography, becoming every day more and more familiar to the public, is that which produces enlarged portraits, even life-size ones, from the old daguerrotype or more recent photographic miniature. As we have seen this process, a closet is arranged as a camera-obscura, and the enlarged image is thrown down through a lens above on a sheet of sensitive paper placed on a table capable of being easily elevated or depressed. The

image, weakened by diffusion over so large a space, prints itself slowly, but at last comes out with a clearness which is surprising, — a fact which is parallel to what is observed in the *stereoscopticon*, where a picture of a few square inches in size is “extended” or diluted so as to cover some hundreds of square feet, and yet preserves its sharpness to a degree which seems incredible.

The copying of documents to be used as evidence is another most important application of photography. No scribe, however skilful, could reproduce such a paper as we saw submitted to our fellow-workman in Mr. Black’s establishment the other day. It contained perhaps a hundred names and marks, but smeared, spotted, soiled, rubbed, and showing every awkward shape of penmanship that a miscellaneous collection of half-educated persons could furnish. No one, on looking at the photographic copy, could doubt that it was a genuine reproduction of a real list of signatures; and when half a dozen such copies, all just alike, were shown, the conviction became a certainty that all had a

common origin. This copy was made with a *Harrison's globe lens* of sixteen inches' focal length, and was a very sharp and accurate duplicate of the original. It is claimed for this new American invention that it is "quite ahead of anything European"; and the certificates from the United States Coast-Survey Office go far towards sustaining its pretensions.

Some of our readers are aware that photographic operations are not confined to the delineation of material objects. There are certain establishments in which, for an extra consideration (on account of the *difficilis ascensus*, or other long journey they have to take), the spirits of the departed appear in the same picture which gives the surviving friends. The actinic influence of a ghost on a sensitive plate is not so strong as might be desired ; but considering that spirits are so nearly immaterial, that the stars, as Ossian tells us, can be seen through their vaporous outlines, the effect is perhaps as good as ought to be expected.

Mrs. Brown, for instance, has lost her infant, and wishes to have its spirit-portrait taken with

her own. A special sitting is granted, and a special fee is paid. In due time the photograph is ready, and sure enough, there is the misty image of an infant in the background, or, it may be, across the mother's lap. Whether the original of the image was a month or a year old, whether it belonged to Mrs. Brown or Mrs. Jones or Mrs. Robinson, King Solomon, who could point out so sagaciously the parentage of unauthenticated babies, would be puzzled to guess. But it is enough for the poor mother, whose eyes are blinded with tears, that she sees a print of drapery like an infant's dress, and a rounded something, like a foggy dumpling, which will stand for a face; she accepts the spirit-portrait as a revelation from the world of shadows. Those who have seen shapes in the clouds, or remember Hamlet and Polonius, or who have noticed how readily untaught eyes see a portrait of parent, spouse, or child in almost any daub intended for the same, will understand how easily the weak people who resort to these places are deluded.

There are various ways of producing the

spirit-photographs. One of the easiest is this. First procure a bereaved subject with a mind "sensitized" by long immersion in credulity. Find out the age, sex, and whatever else you can, about his or her departed relative. Select from your numerous negatives one that corresponds to the late lamented as nearly as may be. Prepare a sensitive plate. Now place the negative against it and hold it up close to your gas-lamp, which may be turned up pretty high. In this way you get a foggy copy of the negative in one part of the sensitive plate, which you can then place in the camera and take your flesh-and-blood sitter's portrait upon it in the usual way. An appropriate background for these pictures is a view of the asylum for feeble-minded persons, the group of buildings at Somerville, and possibly, if the penitentiary could be introduced, the hint would be salutary.

The number of amateur artists in photography is continually increasing. The interest we ourselves have taken in some results of photographic art has brought us under a weight of

obligation to many of them which we can hardly expect to discharge. Some of the friends in our immediate neighborhood have sent us photographs of their own making, which, for clearness and purity of tone, compare favorably with the best professional work. Among our more distant correspondents there are two so widely known to photographers that we need not hesitate to name them: Mr. Coleman Sellers of Philadelphia and Mr. S. Wager Hull of New York. Many beautiful specimens of photographic art have been sent us by these gentlemen, — among others, some exquisite views of Sunnyside and of the scene of Ichabod Crane's adventures. Mr. Hull has also furnished us with a full account of the dry process, as followed by him, and from which he brings out results hardly surpassed by any method.

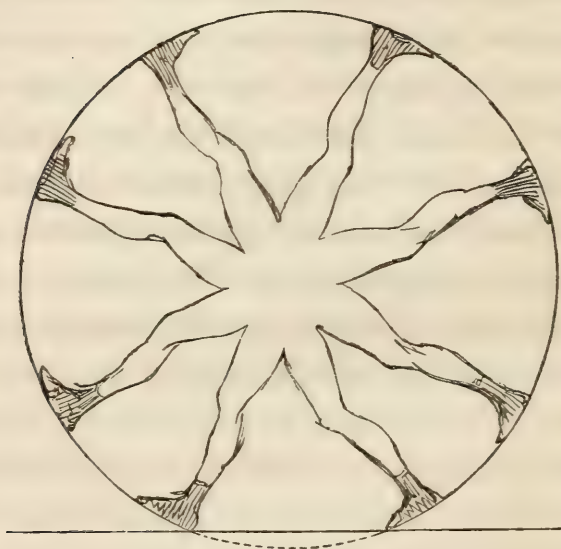
A photographic intimacy between two persons who never saw each other's faces (that is, in Nature's original positive, the principal use of which, after all, is to furnish negatives from which portraits may be taken) is a new form of friendship. After an introduction by means

of a few views of scenery or other impersonal objects, with a letter or two of explanation, the artist sends his own presentment, not in the stiff shape of a purchased *carte de visite*, but as seen in his own study or parlor, surrounded by the domestic accidents which so add to the individuality of the student or the artist. You see him at his desk or table with his books and stereoscopes round him ; you notice the lamp by which he reads, — the objects lying about ; you guess his condition, whether married or single ; you divine his tastes, apart from that which he has in common with yourself. By and by, as he warms towards you, he sends you the picture of what lies next to his heart, — a lovely boy, for instance, such as laughs upon us in the delicious portrait on which we are now looking, or an old homestead, fragrant with all the roses of his dead summers, caught in one of Nature's loving moments, with the sunshine gilding it like the light of his own memory. And so these shadows have made him, with his outer and his inner life, a reality for you ; and but for his voice, which you have never heard, you know

him better than hundreds who call him by name, as they meet him year after year, and reckon him among their familiar acquaintances.

To all these friends of ours, those whom we have named, and not less those whom we have silently remembered, we send our grateful acknowledgments. They have never allowed the interest we have long taken in the miraculous art of photography to slacken. Though not one of them may learn anything from this simple account we have given, they will perhaps allow that it has a certain value for less instructed readers, in consequence of its numerous and rich omissions of much which, however valuable, is not at first indispensable.

THE HUMAN WHEEL, ITS SPOKES AND FELLOES.



THE starting-point of this paper was a desire to call attention to certain remarkable AMERICAN INVENTIONS, especially to one class of mechanical contrivances, which, at the present time, assumes a vast importance and inter-

ests great multitudes. The limbs of our friends and countrymen are a part of the melancholy harvest which War is sweeping down with Dahlgren's mowing-machine and the patent reapers of Springfield and Hartford. The admirable contrivances of an American inventor, prized as they were in ordinary times, have risen into the character of great national blessings since the necessity for them has become so widely felt. While the weapons that have gone from Mr. Colt's armories have been carrying death to friend and foe, the beneficent and ingenious inventions of MR. PALMER have been repairing the losses inflicted by the implements of war.

The study of the artificial limbs which owe their perfection to his skill and long-continued labor has led us a little beyond its first object, and finds its natural prelude in some remarks on the natural limbs and their movements. Accident directed our attention, while engaged with this subject, to the efforts of another ingenious American to render the use of our lower extremities easier by shaping their arti-

ficial coverings more in accordance with their true form than is done by the empirical cordwainer, and thus *Dr. Plumer* must submit to the coupling of some mention of his praiseworthy efforts in the same pages with the striking achievements of his more aspiring compatriot.

We should not tell the whole truth, if we did not own that we have for a long time been lying in wait for a chance to say something about the mechanism of walking, because we thought we could add something to what is known about it from a new source, accessible only within the last few years, and never, so far as we know, employed for its elucidation, namely, *the instantaneous photograph*.

The two accomplishments common to all mankind are walking and talking. Simple as they seem, they are yet acquired with vast labor, and very rarely understood in any clear way by those who practise them with perfect ease and unconscious skill.

Talking seems the hardest to comprehend. Yet it has been clearly explained and success-

fully imitated by artificial contrivances. We know that the moist membranous edges of a narrow crevice (the glottis) vibrate as the reed of a clarionet vibrates, and thus produce the human *bleat*. We narrow or widen or check or stop the flow of this sound by the lips, the tongue, the teeth, and thus *articulate*, or break into joints, the even current of sound. The sound varies with the degree and kind of interruption, as the "babble" of the brook with the shape and size of its impediments, — pebbles, or rocks, or dams. To whisper is to articulate without *bleating*, or vocalizing; to *coo* as babies do is to bleat or vocalize without articulating. Machines are easily made that bleat not unlike human beings. A bit of India-rubber tube tied round a piece of glass tube is one of the simplest voice-uttering contrivances. To make a machine that *articulates* is not so easy; but we remember Maelzel's wooden children, which said, "Pa-pa" and "Ma-ma"; and more elaborate and successful speaking machines have, we believe, been since constructed.

But no man has been able to make a figure

that can *walk*. Of all the automata imitating men or animals moving, there is not one in which the legs are the true sources of motion. So said the Webers * more than twenty years ago, and it is as true now as then. These authors, after a profound experimental and mathematical investigation of the mechanism of animal locomotion, recognize the fact that our knowledge is not yet so far advanced that we can hope to succeed in making real walking machines. But they conceive that the time may come hereafter when colossal figures will be constructed whose giant strides will not be arrested by the obstacles which are impassable to wheeled conveyances.

We wish to give our readers as clear an idea as possible of that wonderful art of balanced vertical progression which they have practised, as M. Jourdain talked prose, for so many years, without knowing what a marvellous accomplishment they had mastered. We shall have to begin with a few simple anatomical data.

* *Traité de la Mécanique des Organes de la Locomotion*.
Translated from the German in the *Encyclopédie Anatomique*.
Paris, 1843.

The foot is arched both longitudinally and transversely, so as to give it elasticity, and thus break the sudden shock when the weight of the body is thrown upon it. The ankle-joint is a loose hinge, and the great muscles of the calf can straighten the foot out so far that practised dancers walk on the tips of their toes. The knee is another hinge-joint, which allows the leg to bend freely, but not to be carried beyond a straight line in the other direction. Its further forward movement is checked by two very powerful cords in the interior of the joint, which cross each other like the letter X, and are hence called the *crucial ligaments*. The upper ends of the thigh-bones are almost globes, which are received into the deep cup-like cavities of the haunch-bones. They are tied to these last so loosely, that, if their ligaments alone held them, they would be half out of their sockets in many positions of the lower limbs. But here comes in a simple and admirable contrivance. The smooth, rounded head of the thigh-bone, moist with glairy fluid, fits so perfectly into the smooth, rounded cavity which receives it, that it holds

firmly by *suction*, or atmospheric pressure. It takes a hard pull to draw it out after all the ligaments are cut, and then it comes with a smack like a tight cork from a bottle. Holding in this way by the close apposition of two polished surfaces, the lower extremity swings freely forward and backward like a *pendulum*, if we give it a chance, as is shown by standing on a chair upon the other limb, and moving the pendent one out of the vertical line. The force with which it swings depends upon its weight, and this is much greater than we might at first suppose ; for our limbs not only carry themselves, but our bodies also, with a sense of lightness rather than of weight, when we are in good condition. Accident sometimes makes us aware how heavy our limbs are. An officer, whose arm was shattered by a ball in one of our late battles, told us that the dead weight of the helpless member seemed to drag him down to the earth ; he could hardly carry it ; it “ weighed a ton,” to his feeling, as he said.

In *ordinary walking* a man’s lower extremity swings essentially by its own weight, requiring

little muscular effort to help it. So heavy a body easily overcomes all impediments from clothing, even in the sex least favored in its costume. But if a man's legs are pendulums, then a short man's legs will swing quicker than a tall man's, and he will take more steps to a minute, other things being equal. Thus there is a natural rhythm to a man's walk, depending on the length of his legs, which beat more or less rapidly as they are longer or shorter, like metronomes differently adjusted, or the pendulums of different time-keepers. Commodore Nutt is to M. Bihin in this respect as a little, fast-ticking mantel-clock is to an old-fashioned, solemn-clicking, upright time-piece.

The mathematical formulæ in which the Messrs. Weber embody their results would hardly be instructive to most of our readers. The figures of their Atlas would serve our purpose better, had we not the means of coming nearer to the truth than even their careful studies enabled them to do. We have selected a number of instantaneous stereoscopic views of the streets and public places of Paris and of

New York, each of them showing numerous walking figures, among which some may be found in every stage of the complex act we are studying. Mr. Darley has had the kindness to leave his higher tasks to transfer several of these to our pages, so that the reader may be sure that he looks upon an exact copy of real human individuals in the act of walking.



Fig. 1.

The first subject is caught with his legs stretched in a stride, the remarkable length of

which arrests our attention. The sole of the right foot is almost vertical. By the action of the muscles of the calf it has *rolled off* from the ground like a portion of the tire of a wheel, the heel rising first, and thus the body, already advancing with all its acquired velocity, and inclined forward, has been pushed along, and, as it were, *tipped over*, so as to fall upon the other foot, now ready to receive its weight.



Fig. 2.

In the second figure, the right leg is bending at the knee, so as to lift the foot from

the ground, in order that it may swing forward.



Fig. 3.

The next stage of movement is shown in the *left* leg of Figure 3. This leg is seen suspended in air, a little beyond the middle of the arc through which it swings, and before it has straightened itself, which it will presently do, as shown, in the next figure.

The foot has now swung forward, and tending to swing back again, the limb being straightened, and the body tipped forward, the heel

strikes the ground. The angle which the sole



Fig. 4.

of the foot forms with the ground increases with the length of the stride ; and as this last surprised us, so the extent of this angle astonishes us in many of the figures, in this among the rest.

The heel strikes the ground with great force, as the wear of our boots and shoes in that part shows us. But the projecting heel of the human foot is the arm of a lever, having the ankle-

joint as its fulcrum, and, as it strikes the ground, brings the sole of the foot down flat upon it, as shown in Figure 1. At the same time the weight of the limb and body is thrown upon the foot, by the joint effect of muscular action and acquired velocity, and the other foot is now ready to rise from the ground and repeat the process we have traced in its fellow.

No artist would have dared to draw a walking figure in attitudes like some of these. The swinging limb is so much shortened that the toe never by any accident scrapes the ground, if this is tolerably even. In cases of partial paralysis, the scraping of the toe, as the patient walks, is one of the characteristic marks of imperfect muscular action.

Walking, then, is a perpetual falling with a perpetual self-recovery. It is a most complex, violent, and perilous operation, which we divest of its extreme danger only by continual practice from a very early period of life. We find how complex it is when we attempt to analyze it, and we see that we never understood it thoroughly until the time of the instantaneous pho-

tograph. We learn how violent it is, when we walk against a post or a door in the dark. We discover how dangerous it is, when we slip or trip and come down, perhaps breaking or dislocating our limbs, or overlook the last step of a flight of stairs, and discover with what headlong violence we have been hurling ourselves forward.

Two curious facts are easily proved. First, a man is shorter when he is walking than when at rest. We have found a very simple way of showing this by having a rod or yardstick placed horizontally, so as to touch the top of the head forcibly, as we stand under it. In walking rapidly beneath it, even if the eyes are shut, to avoid involuntary stooping, the top of the head will not even graze the rod. The other fact is, that one side of a man always tends to outwalk the other, so that no person can walk far in a straight line, if he is blindfolded.

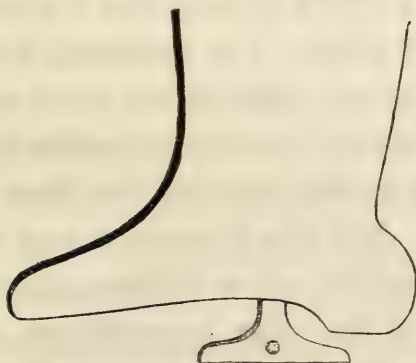
The somewhat singular illustration at the head of our article carries out an idea which has only been partially alluded to by others. Man is a *wheel*, with two spokes, his legs, and

two fragments of a tire, his feet. He *rolls* successively on each of these fragments from the heel to the toe. If he had spokes enough, he would go round and round as the boys do when they "make a wheel" with their four limbs for its spokes. But having only two available for ordinary locomotion, each of these has to be taken up as soon as it has been used, and carried forward to be used again, and so alternately with the pair. The peculiarity of biped-walking is, that the centre of gravity is shifted from one leg to the other, and the one not employed can shorten itself so as to swing forward, passing by that which supports the body.

This is just what no automaton can do. Many of our readers have, however, seen a young lady in the shop windows, or entertained her in their own nurseries, who professes to be this hitherto impossible walking automaton, and who calls herself by the Homeric-sounding epithet *Auto-peripatetikos*. The golden-booted legs of this young lady remind us of Miss Kilmansegg, while the size of her feet assures us that she is not in any way related to Cinderella. On be-

ing wound up, as if she were a piece of machinery, and placed on a level surface, she proceeds to toddle off, taking very short steps, like a child, holding herself very stiff and straight, with a little lifting at each step, and all this with a mighty inward whirring and buzzing of the enginery which constitutes her muscular system.

An autopsy of one of her family who fell into our hands reveals the secret springs of her action. Wishing to spare her as a member of the defenceless sex, it pains us to say, that, ingenious as her counterfeit walking is, she is an impostor. Worse than this, — with all our rev-



erence for her brazen crinoline, duty compels us to reveal a fact concerning her which will shock

the feelings of those who have watched the stately rigidity of decorum with which she moves in the presence of admiring multitudes. *She is a quadruped!* Inside of her great golden boots, which represent one pair of feet, is another smaller pair, which move freely through these hollow casings.

Four *cams* or eccentric wheels impart motion to her four supports, by which she is carried forward, always resting on two of them, — the boot of one side and the foot of the other. Her movement, then, is not walking; it is not skating, which it seems to resemble; it is more like that of a person walking with two crutches besides his two legs. The machinery is simple enough; a strong spiral spring, three or four cog-wheels and pinions, a fly to regulate the motion, as in a musical box, and the cams before mentioned. As a toy, it or she is very taking to grown people as well as children. It is a literal fact, that the police requested one of our dealers to remove Miss Autoperipatetikos from his window, because the crowd she drew obstructed the sidewalk.

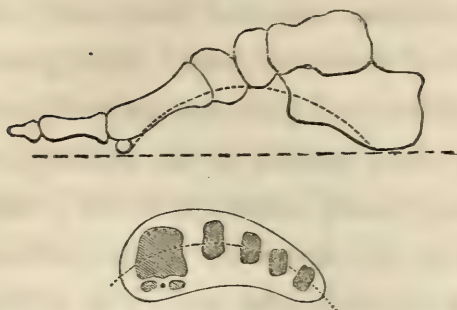
We see by our analysis of the process, and by the difficulty of imitating it, that walking is a much more delicate, perilous, complicated operation than we should suppose, and well worth studying in a practical point of view, to see what can be done to make it easier and safer. Two Americans have applied themselves to this task: one laboring for those who possess their lower limbs and want to use them to advantage, the other for such as have had the misfortune to lose one or both of them.

Dr. J. C. Plumer, formerly of Portland, now of Boston, has devoted himself to the study of the foot, and to the construction of a last upon which a boot or shoe can be moulded which shall be adapted to its form and accommodated to its action.

Most persons know something of the cruel injustice to which the feet are subjected, and the extraordinary distortions and diseases to which they are liable in consequence. The foot's fingers are the slaves in the republic of the body. Their black leathern integument is only the mark of their servile condition. They bear the

burdens, while the hands, their white masters, handle the money and wear the rings. They are crowded promiscuously in narrow prisons, while each of the hand's fingers claims its separate apartment, leading from the antechamber, in the dainty glove. As a natural consequence of all this, their faculties are cramped, they grow into ignoble shapes, they become callous by long abuse, and all their natural gifts are crushed and trodden out of them.

Dr. Plumer is the Garrison of these oppressed members of the body corporeal. He comes to break their chains, to lift their bowed figures, to strengthen their weakness, to restore them to the dignity of digits. To do this, he begins where every sensible man would, by contemplating the natural foot as it appears in infancy, unspoiled as yet by social corruptions, in adults fortunate enough to have escaped these destructive influences, and in the grim skeleton aspect divested of its outward disguises. We will give the reader two views of the latter kind, illustrating the longitudinal and transverse arches before spoken of.



A man who walks on natural surfaces, with his feet unprotected by any artificial defences, calls the action of these arches into full play at every step. The longitudinal arch is the most strikingly marked of the two. In some races and in certain individuals it is much developed, so as to give the high instep which is prized as an evidence of good blood. The Arab says that a stream of water can flow under his foot without touching its sole. Under the conditions supposed, of a naked foot on a natural surface, the arches of the foot will commonly maintain their integrity, and give the noble savage or barefooted Scotch lassie the elasticity of gait which we admire in the children of Nature.

But as a large portion of mankind tread on artificial hard surfaces, especially pavements,

their feet are subjected to a very unnatural amount of wear and tear. How great this is the inhabitants of cities are apt to forget. After passing some months in the country, we have repeatedly found ourselves terribly lamed and shaken by our first walk on the pavement. A party of city-folk who landed on a beach upon Cape Cod complained greatly to one of the natives accompanying them of the difficulty of walking through the deep sand. "Ah," he answered, "it's nothing to the trouble I have walking on your city sidewalks." To save the feet from the effects of violent percussion and uneven surfaces, they must be protected by thick soles, and thick soles require strong upper-leather. When the foot is wedged into one of these casings, a new boot, a struggle begins between them, which ends in a compromise. The foot becomes more or less compressed or deformed, and the boot more or less stretched at the points where the counter-pressure takes place.

On the part of the foot, the effects of this warfare are liable to show themselves in thick-

ening and inflammation of the integuments, in displacement of the toes, and occasionally in the breaking down of the transverse or longitudinal arches. On the part of the boot or shoe, there is a gradual accommodation which in time fits it to the foot almost as if it had been moulded upon it, so that a little before it is worn out it is invaluable, like other blessings brightening before they take their flight.

Now Dr. Plumer's improvements proceed from two series of data. *First*, certain theoretical inferences from the facts above named. Finding the arches liable to break down, he supports the transverse arch by making the inner surface of the sole corresponding to it *convex* instead of concave transversely; he makes the middle portion of the sole convex again in both directions to support the longitudinal arch, and for the same reason extends the heel of the boot or shoe forward, so as to support the anterior portion of the heel of the foot. *Secondly*, Dr. Plumer takes an old shoe that has done good service, and studies the reliefs and hollows which the foot has shaped on the inner surface

of its sole. Comparing the empirical results of this examination with those based on the anatomical data above given, and finding a general coincidence in them, he constructs his last in accordance with their joint teachings. Theoretically, Dr. Plumer is on somewhat dangerous ground. If the arches of the foot are made to yield like elliptical springs, why support them? But we subject them to such unnatural conditions by pressure from above over the instep, by adding high heels to our boots and shoes, by taking away all yielding qualities from the soil on which we tread, that very probably they may want artificial support as much as the soles of the feet want artificial protection. If, now, we find that an old, easy shoe has worked the inside surface of its sole into convexities which support the arches, we are safe in imitating that, at any rate. We shall have a new shoe with some, at least, of the virtues of the old one.

This all sounds very well, and the next question is, whether it works well. We cannot but remember the coat made for Mr. Gulliver by the Laputan tailors, which, though projected

from the most refined geometrical data and the most profound calculations, he found to be the worst fit he ever put on his back. We must ask those who have eaten the pudding how it tastes, and those who have worn the shoe how it wears. We have no satisfactory experience of our own, having only within a week or two, by mere accident, stumbled into a pair of Plumerian boots, and being thus led to look into a matter which seemed akin to the main subject of this paper. But the author of "Views Afoot," who ought to be a sovereign authority on all that interests pedestrians, confirms from his own experience the favorable opinions expressed by several of our most eminent physicians, after an examination of the principles of construction. We are informed that the Plumer last has been recently adopted for the use of the army. We add our own humble belief that Dr. Plumer deserves well of mankind for applying sound anatomical principles to the construction of coverings for the feet, and for contriving a last serving as a model for a boot or shoe which is adapted to the form of the foot from the first,

instead of having to be broken in by a painful series of limping excursions, too often accompanied by impatient and even profane utterances.

It is not two years since the sight of a person who had lost one of his lower limbs was an infrequent occurrence. Now, alas! there are few of us who have not a cripple among our friends, if not in our own families. A mechanical art which provided for an occasional and exceptional want has become a great and active branch of industry. War unmakes legs, and human skill must supply their places as it best may.

Our common idea of a wooden leg is realized in the "peg" of the Greenwich pensioner. This simple contrivance has done excellent service in its time, and may serve a good purpose still in some cases. A plain working-man, who has outlived his courting-days and need not sacrifice much to personal appearance, may find an honest, old fashioned wooden leg, cheap, lasting, requiring no repairs, the best thing for his purpose. In higher social positions, and at an

age when appearances are realities, in the condition of the Marquis of Anglesea, for instance, it becomes important to provide the cripple with a limb which shall be presentable in polite society, where misfortunes of a certain obtrusiveness may be pitied, but are never tolerated under the chandeliers.

The leg invented by Mr. Potts, and bearing the name of the "Anglesea leg," was long famous, and doubtless merited the reputation it acquired as superior to its predecessors. But legs cannot remain stationary while the march of improvement goes on around them, and they, too, have moved onward with the stride of progress.

A boy of ten years old, living in a New Hampshire village, had one of his legs crushed so as to require amputation. The little fellow was furnished with a "peg," and stumped round upon it for ten years. We can imagine what he suffered as he grew into adolescence under the cross of this unsightly appendage. He was of comely aspect, tall, well-shaped, with well-marked, regular features. But just at the

period when personal graces are most valued, when a good presence is a blank check on the Bank of Fortune, with Nature's signature at the bottom, he found himself made hideous by this fearful-looking counterfeit of a limb. It announced him at the threshold he reached with beating heart by a thump more energetic than the palpitation in his breast. It identified him as far as the eye of jealousy could see his moving figure. The "peg" became intolerable, and he unstrapped it, and threw himself on the tender mercies of the crutch.

But the crutch is at best an instrument of torture. It presses upon a great bundle of nerves; it distorts the figure; it stamps a character of its own upon the whole organism; it is even accused of distempering the mind itself.

This young man, whose name was "B. FRANK. PALMER," (the abbreviations probably implying the name of a distinguished Boston philosopher of the last century, whose visit to Philadelphia is still remembered in that city,) set himself at work to contrive a limb which should take the place of the one he had lost, fulfilling its func-

tions and counterfeiting its aspect so far as possible. The result was the "Palmer leg," one of the most unquestionable triumphs of American ingenuity. Its victorious march has been unimpeded by any serious obstacle since it first stepped into public notice. The inventor was introduced by the late Dr. John C. Warren, in 1846, to the Massachusetts General Hospital, which institution he has for many years supplied with his artificial limbs. He received medals from the American Institute, the Massachusetts Charitable Association, and the Great Exhibition in New York, and obtained an honorary mention from the Royal Commissioners of the World's Exhibition in London, — being the only maker of legs so distinguished. These are only a few of fifty honorary awards he has received at various times. The famous surgeons of London, the *Société de Chirurgie* of Paris, and the most celebrated practitioners of the United States have given him their hearty recommendations. So lately as last August, that shrewd and skilful surgeon, Dr. Henry J. Bigelow, who is as cautious in handling his epithets as he is

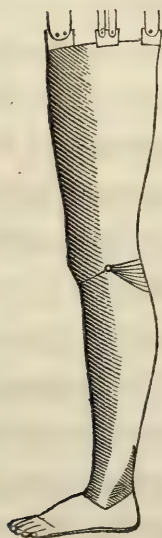
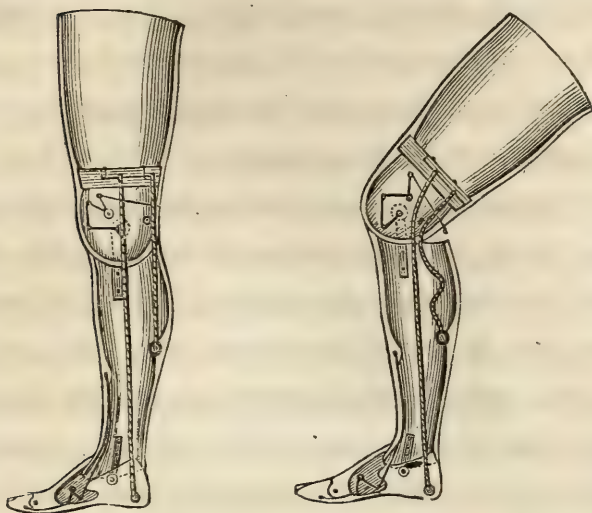
bold in using the implements of his art, strongly advised Surgeon-General Hammond to adopt the Palmer leg, which, after a dozen years' experience, he had found none to equal. We see it announced that the Board of Surgeons appointed by the Surgeon-General to select the best arm and leg to be procured by the Government for its crippled soldiers, chose that of Mr. Palmer, and that Dr. Hammond approved their selection.

We have thought it proper to show that Mr. Palmer's invention did not stand in need of our commendation. Its merits, as we have seen, are conceded by the tribunals best fitted to judge, and we are therefore justified in selecting it as an illustration of American mechanical skill.

We give three views of the Palmer leg: an inside view when extended, a second when flexed, a third as it appears externally.

The Committee on Science and the Arts of the Franklin Institute of Pennsylvania thus stated the peculiarities of Mr. Palmer's invention:—

“*First.* An ingenious arrangement of springs



and cords in the *inside* of the limb, by which, when the wearer is in the erect position, the limb is extended, and the foot flexed so as to present a natural appearance.

“*Second.* By a second arrangement of cords and springs in the inside of the limb, the foot and toes are gradually and easily extended, when the heel is placed in contact with the ground. In consequence of this arrangement, the limping gait, and the unpleasant noise made by the sudden stroke of the ball of the foot upon the ground in walking, which are so obvious in the ordinary leg, are avoided.

“*Third.* By a peculiar arrangement of the knee-joint, it is rendered little liable to wear, and all lateral or rotary motion is avoided. It is hardly necessary to remark that any such motion is undesirable in an artificial leg, as it renders its support unstable.”

Before reporting some of the facts which we have seen, or learned by personal inquiry, we must be allowed, for the sake of convenience, to exercise the privilege granted to all philosophical students, of enlarging the nomenclature

applicable to the subject of which we are treating.

Man, according to the Sphinx, is successively a *quadruped*, a *biped*, and a *triped*. But circumstances may change his natural conditions. If he loses a leg, he becomes a *uniped*. If he loses both his legs, he becomes a *nulliped*. If art replaces the loss of one limb with a factitious substitute, he becomes a *ligniped*, or, if we wish to be very precise, a *uniligniped*; two wooden legs entitle him to be called a *biligniped*. Our terminology being accepted, we are ready to proceed.

To make ourselves more familiar with the working of the invention we are considering, we have visited Mr. Palmer's establishments in Philadelphia and Boston. The distinguished "Surgeon-Artist" is a man of fine person, as we have said. But if he has any personal vanity, it does not betray itself with regard to that portion of his organism which Nature furnished him. There is some reason to think that Mr. Palmer is a little ashamed of the lower limb which he brought into the world with him. At least, if he follows the common rule and puts that which

he considers his best foot foremost, he evidently awards the preference to that which was born of his brain over the one which he owes to his mother. He walks as well as many do who have their natural limbs, though not so well as some of his own patients. He puts his vegetable leg through many of the movements which would seem to demand the contractile animal fibre. He goes up and down stairs with very tolerable ease and despatch. Only when he comes to *stand* upon the human limb, we begin to find that it is not in all respects equal to the divine one. For a certain number of seconds he can poise himself upon it; but Mr. Palmer, if he indulges in verse, would hardly fill the Horatian complement of lines in that attitude. In his anteroom were unipeds in different stages of their second learning to walk, as lignipeds. At first they move with a good deal of awkwardness, but gradually the wooden limb seems to become, as it were, penetrated by the nerves, and the intelligence to run downwards, until it reaches the last joint of the member.

Mr. Palmer, as we have incidentally men-

tioned, has a branch establishment in Boston, to which also we have paid a visit, in order to learn some of the details of the manufacture to which we had not attended in our pleasant interview with the inventor. The antechamber here, too, was the nursery of immature lignipeds, ready to exhibit their growing accomplishments to the inquiring stranger. It almost seems as if the artificial leg were the scholar, rather than the person who wears it. The man does well enough, but the leg is stupid until practice has taught it just what is expected from its various parts.

The polite Boston partner, who, if he were in want of a customer, would almost persuade a man with two good legs to provide himself with a third, carried us to the back part of the building, where legs are organized.

The *willow*, which furnishes the charcoal for the gunpowder that blows off limbs, is the wood chosen to supply the loss it has helped to occasion. It is light, strong, does not warp or "check" so much as many other woods, and is, as the workmen say, *healthy*, that is, not irri-

tating to the parts with which it is in contact. Whether the *salicine* it may contain enters the pores, and invigorates the system, may be a question for those who remember the drugs in the Sultan's bat-handle and the remarkable cure they wrought. This wood is kept in a dry-house with as much care as that intended for the manufacture of pianos. It is thoroughly steamed also, before using.

The wood comes in rudely shaped blocks, as lasts are sent to the factory, seeming to have been coarsely hewed out of the log. The shaping, as we found to our surprise, is all done by hand. We had expected to see great lathes, worked by steam-power, taking in a rough stick and turning out a finished limb. But it is shaped very much as a sculptor finishes his marble, with an eye to artistic effect, — not so much in the view of the stranger, who does not look upon its naked loveliness, as in that of the wearer, who is seduced by its harmonious outlines into its purchase, and solaced with the consciousness that he carries so much beauty and symmetry about with him. The hollowing-

out of the interior is done by wicked-looking blades and scoops at the end of long stems, suggesting the thought of dentists' instruments as they might have been in the days of the giants. The joints are most carefully made, more particularly at the knee, where a strong bolt of steel passes through the solid wood. Windows, oblong openings, are left in the sides of the limb, to insure a good supply of air to the extremity of the mutilated limb. Many persons are not aware that all parts of the surface *breathe*, just as the lungs breathe, exhaling carbonic acid as well as water, and taking in more or less oxygen.

One of the workmen, a pleasant-looking young fellow, was himself, we were told, a ligniped. We begged him to give us a specimen of his walking. He arose and walked rather slowly across the room and back. "Once more," we said, not feeling quite sure which was Nature's leg and which Mr. Palmer's. So he walked up and down the room again, until we had satisfied ourselves which was the leg of willow and which that of flesh and bone. It is not, perhaps, to the credit of our eyes or observ-

ing powers, but it is a fact, that we deliberately selected *the wrong leg*. No victim of the thimble-rigger's trickery was ever more completely taken in than we were by the contrivance of the ingenious Surgeon-Artist.

Our freely expressed admiration led to the telling of wonderful stories about the doings of persons with artificial legs. One individual was mentioned who *skated* particularly well ; another who *danced* with zeal and perseverance ; and a third who must needs *swim* in his leg, which brought on a dropsical affection of the limb, — to which kind of complaint the willow has, of course, a constitutional tendency, — and for which it had to come to the infirmary where the diseases that wood is heir to are treated.

But the most wonderful monuments of the great restorer's skill are the patients who have lost both legs, — *nullipeds*, as presented to Mr. Palmer, *bilignipeds*, as they walk forth again before the admiring world, balanced upon their two new-born members. We have before us delineations of six of these hybrids between the animal and vegetable world. One of them was

employed at a railway station near this (Atlantic) city, where he was often seen by a member of our own household, whose testimony we are in the habit of considering superior in veracity to the naked truth as commonly delivered. He walked about, we are assured, a little slowly and stiffly, but in a way that hardly attracted attention.

The inventor of the leg has not been contented to stop there. He has worked for years upon the construction of an artificial *arm*, and has at length succeeded in arranging a mechanism, which, if it cannot serve a pianist or violinist, is yet equal to holding the reins in driving, receiving fees for professional services, and similar easy labors. Where Mr. Palmer means to stop in supplying bodily losses it would be premature to say. We suppose the accidents happening occasionally from the use of the guillotine are beyond his skill, and spare our readers the lively remark suggested by the contrary hypothesis.

It is one of the signs of our advancing Amer-

ican civilization, that the arts which preserve and restore the personal advantages necessary or favorable to cultivated social life should have reached such perfection among us. American dentists have achieved a reputation which has sent them into the palaces of Europe to open the mouths of sovereigns and princes as freely as the jockeys look into those of horses and colts. Bad teeth, too common among us, help to breed good dentists, no doubt; but besides this there is an absolute demand for a certain comeliness of person throughout all the decent classes of our society. It is the same standard of propriety in appearances which lays us open to the reproach of caring too much for dress. If the national ear for music is not so acute as that of some other peoples, the national eye for the harmonies of form and color is better than we often find in older communities. We have a right to claim that our sculptors and painters prove so much as this for us. American taste was offended, outraged, by the odious "peg" which the Old-World soldier or beggar was proud to show. We owe the well-shaped,

intelligent, docile limb, the half-reasoning willow of Mr. Palmer, to the same sense of beauty and fitness which moulded the soft outlines of the Indian Girl and the White Captive in the studio of his namesake at Albany.

As we wean ourselves from the Old World, and become more and more nationalized in our great struggle for existence as a free people, we shall carry this aptness for the production of beautiful forms more and more into common life, which demands first what is necessary and then what is pleasing. It is but a step from the painter's canvas to the weaver's loom, and the pictures which are leaving the easel to-day will show themselves in the patterns that sweep the untidy sidewalks to-morrow. The same plastic power which is showing itself in the triumphs of American sculpture will reach the forms of our household utensils. The beans of Beverly shall yet be baked in vases that Etruria might have envied, and the clay pipe of the Americanized Milesian shall be a thing of beauty as well as a joy forever. We are already pushing the plastic arts farther than many

persons have suspected. There is a small town not far from us where a million dollars' worth of gold is annually beaten into ornaments for the breasts, the fingers, the ears, the necks of women. Many a lady supposes she is buying Parisian adornments, when *Attleborough* could say to her proudly, like Cornelia, "These are my jewels." The workmen of this little town not only meet the tastes of the less fastidious classes, to whom all that glisters is gold, but they shape the purest metal into artistic and effective patterns. When the Koh-i-noor — the Mountain of Light — was to be fashioned, it was found to be almost as formidable a task as that of Xerxes, when he undertook to hew Mount Athos to the shape of man. The great crystal was sent to Holland, as the only place where it could be properly cut. We have lately seen a brilliant which, if not a mountain of light, was yet a very respectable mound of radiance, valued at some ten or twelve thousand dollars, cut in this virgin settlement, and exposed in one of our shop-windows to tempt our frugal villagers.

Monsieur Trousseau, Professor in the Medical School of Paris, delivered a discursive lecture not long ago, in which he soared from the region of drugs, his well-known special province, into the thin atmosphere of æsthetics. It is the influence that surrounds his fortunate fellow-citizens, he declares, which alone preserves their intellectual supremacy. If a Parisian milliner, he says, remove to New York, she will so degenerate in the course of a couple of years that the squaw of a Choctaw chief would be ashamed to wear one of her bonnets.

Listen, O Parisian cockney, pecking among the brood most plethoric with conceit, of all the coop-fed citizens who tread the pavements of earth's many-chimneyed towns! America has made implements of husbandry which out-mow and out-reap the world. She has contrived man-slaying engines which kill people faster than any others. She has modelled the wave-slicing clipper, which outsails all your argosies and armadas. She has revolutionized naval warfare once by the steamboat. She has revolutionized it a second time by planting towers

of iron on the elephantine backs of the waves. She has invented the sewing-machine to save the dainty fingers of your virtuous grisettes from uncongenial toil, so that Fifine and Frétillon may have more leisure for self-development. She has taught you a whole new system of labor in her machinery for making watches and rifles. She has bestowed upon you and all the world an anodyne which enables you to cut arms and legs off without hurting the patient; and when his leg is off, she has given you a true artist's limb for your cripple to walk upon, instead of the peg on which he has stumped from the days of Guy de Chauliac to those of M. Nelaton. She has been contriving well-shaped boots and shoes for the very people who, if they were your countrymen, would be clumping about in wooden *sabots*. In works of scientific industry, hardly to be looked for among so new a people, she has distanced your best artificers. The microscopes made at Canastota, in the backwoods of New York, look in vain for their rivals in Paris, and must challenge the best workmanship of London before they can be approached in

excellence. The great eye that stares into the celestial spaces from its workshop in Cambridge dives deeper through their clouds of silvery dust than any instrument mounted in your observatory in face of the Luxembourg. Our artisans produce no Gobelin tapestries or Sèvres porcelain as yet; but when your mobs have looted the Tuileries, our shopkeepers have bought up enough specimens to serve them as patterns by and by.

All this is something for a nation which has hardly pulled up the stumps out of its city market-places. It is sad to reflect that milliners, like Burgundy, are spoiled by transportation to the head-quarters of American fashion. But as the best bonnet of the Empress's own artist would be exploded with yells a couple of seasons after the time when it was the rage, the Icarian professor's flight into the regions of rhetoric has not led him to any very logical resting-place from which he can look down on the æsthetic possibilities of New York or other Western cities emerging from the semi-barbarous state.

We are not proud, of course, of any of the

mechanical triumphs we have won; they are well enough, and show — to borrow the words of a distinguished American, whom, during his too brief career, we held unrivalled by any experimenter in the Old World for the depth as well as the daring of his investigations — that some things can be done as well as others.

Our specialty is of somewhat larger scope. We profess to make men and women out of human beings better than any of the joint-stock companies called dynasties have done or can do it. We profess to make citizens out of men, — not *citoyens*, but persons educated to question all privileges asserted by others, and claim all rights belonging to themselves, — the only way in which the infinitely most important party to the compact between the governed and governing can avoid being cheated out of the best rights inherent in human nature, as an experience the world has seen almost enough of has proved. We are in trouble just now, on account of a neglected hereditary *melanosis*, as Monsieur Trousseau might call it. When we recover from the social and political convulsion it has produced, and

eliminate the *materies morbi*,—and both these events are only matters of time,—perhaps we shall have leisure to breed our own milliners. If not, there will probably be refugees enough from the Old World, who have learned the fashions in courts, and will be glad to turn their knowledge to a profitable use for the benefit of their republican patronesses in New York and Boston.

We have run away from our subject farther than we meant at starting; but an essay on legs could hardly avoid the rambling tendency which naturally belongs to these organs.

A VISIT TO THE AUTOCRAT'S LANDLADY.

BY THE SPECIAL REPORTER OF THE "OCEANIC MISCELLANY."

THE door was opened by a stout, red-armed lump of a woman, who, in reply to my question, said her name was Bridget, but Biddy they calls her mostly. There was a rickety hat-stand in the entry, upon which, by the side of a school-boy's cap, there hung a broad-brimmed white hat, somewhat fatigued by use, but looking gentle and kindly, as I have often noticed good old gentlemen's hats do, after they have worn them for a time. The door of the dining-room was standing wide open, and I went in. A long table, covered with an oil-cloth, ran up and down the length of the room, and yellow wooden chairs were ranged about it. She showed me where the Gentleman used to sit, and, at the

last part of the time, the Schoolmistress next to him. Their chairs were like the rest, but it was odd enough to notice that they stood close together, touching each other, while all the rest were straggling and separate. I observed that peculiar atmospheric flavor which has been described by Mr. Balzac (the French story-teller who borrows so many things from some of our American leading writers), under the name of *odeur de pension*. It is, as one may say, an olfactory perspective of an endless vista of departed breakfasts, dinners, and suppers. It is similar, if not identical, in all temperate climates; a kind of neutral tint, which forms the perpetual background upon which the banquet of to-day strikes out its keener but more transitory aroma. I don't think it necessary to go into any further particulars, because this atmospheric character has the effect of making the dining-rooms of all boarding-houses seem very much alike; and the accident of a hair-cloth sofa, cold, shiny, slippery, prickly, — or a veneered sideboard, with a scale off here and there, and a knob or two missing, — or a portrait, with one hand half

under its coat, the other resting on a pious-looking book, — these accidents, and such as these, make no great difference.

The landlady soon presented herself, and I followed her into the parlor, which was a decent apartment, with a smart centre-table, on which lay an accordion, a recent number of the “*Pactolian*,” a gilt-edged, illustrated book or two, and a copy of the works of that distinguished native author, to whom I feel very spiteful, on account of his having, some years ago, attacked *a near friend of mine*, and whom, on Christian principles, I do not mention, — though I have noticed, that, where there is an accordion on the table, his books are apt to be lying near it.

The landlady was a “wilted” (not exactly withered), sad-eyed woman, of the thin-blooded sort, but firm-fibred, and sharpened and made shrewd by her calling, so that the look with which she ran me over, in the light of a possible boarder, was so searching, that I was half put down by it. I informed her of my errand, which was to make some inquiries concerning two former boarders of hers, in whom a portion

of the public had expressed some interest, and of whom I should be glad to know certain personal details, — as to their habits, appearance, and so on. Any information she might furnish would be looked upon in the light of a literary contribution to the pages of the “*Oceanic Miscellany*,” and be compensated with the well-known liberality of the publishers of that spirited, enterprising, and very popular periodical.

Up to this point, the landlady's countenance had kept that worried, watchful look, which poor women, who have to fight the world single-handed, sooner or later grow into. But now her features relaxed a little. The blow which had crushed her life had shattered her smile, and, as the web of shivered expression shot off its rays across her features, I fancied that Grief had written her face all over with Ws, to mark her as one of his forlorn flock of Widows.

The report here given is partly from the conversation held with the landlady at that time, and partly from written notes which she furnished me; for, finding that she was to be a contributor to the “*Oceanic Miscellany*,” and

that in that capacity she would be entitled to the ample compensation offered by the liberal proprietors of that admirably conducted periodical, — which we are pleased to learn has been growing in general favor, and which, the public may be assured, no pains will be spared to render superior in every respect, — I say, finding that she was to be handsomely remunerated, she entered into the subject with great zeal, both verbally and by letter. The reader will see that I sometimes follow her orthography, and sometimes her pronunciation, as I may have taken it from writing or from speech.

THE LANDLADY'S ACCOUNT.

There is two vacant places at my table, which I should be pleased to fill with two gentlemen, or with a gentleman and his wife, or any respectable people, be they merried or single. It is about the gentleman and the lady that used to set in them places, that inquiries is bein' made. Some has wrote, and some has spoke, and a good many folks, that was unbeknown to me, has come in and wanted to see

the place where they used to set, and some days it's been nothin' but ring, ring, ring, from mornin' till night.

Folks will be curious about them that has wrote in the papers. There's my daughter could n't be easy no way till she'd got a pro-feel of one of them authors, to hang up right over the head of her bed. That's the gentleman that writes stories in the papers, some in the same way this gentleman did, I expect, that inquiries is made about.

I'm a poor woman, that tries to get an honest livin', and works hard enough for it; — lost my husband, and buried five children, and have two livin' ones to support. It's a great loss to me, losin' them two boarders; and if there's anything in them papers he left in that desk that will fetch anything at any of the shops where they buy such things, I'm sure I wish you'd ask the printer to step round here, and stop in and see what any of 'em is worth. I'll let you have one or two of 'em, and then you can see whether you don't know anybody that would take the lot. I suppose you'll put

what I tell you into shape, for, like as not, I sha'n't write it out nor talk jest as folks that make books do.

This gentleman warn't no great of a gentleman to look at. Being of a very moderate dimension, — five foot five *he* said, but five foot four more likely, and I've heerd him say he did n't weigh much over a hundred and twenty pound. He was light-complected rather than darksome, and was one of them smooth-faced people that keep their baird and wiskers cut close, jest as if they 'd be very troublesome if they let 'em grow, — instead of layin' out their face in grass, as my poor husband that 's dead and gone used to say. He was a well-behaved gentleman at table, only talked a good deal, and pretty loud sometimes, and had a way of turnin' up his nose when he did n't like what folks said, that one of my boarders, who is a very smart young man, said he could n't stand, no how, and used to make faces and poke fun at him whenever he see him do it.

He never said a word against any vittles that was set before him, but I mistrusted that he was

more partickerlar in his eatin' than he wanted folks to know of, for I 've knowed him make believe to eat, and leave the vittles on his plate when he did n't seem to fancy 'em ; but he was very careful never to hurt my feelin's, and I don't belief he 'd have spoke, if he had found a tadpole in a dish of chowder. But nothin' could hurry him when he was about his vittles. Many 's the time I 've seen that gentleman keepin' two or three of 'em settin' round the breakfast-table after the rest had swallowed their meal, and the things was cleared off, and Bridget was a-waitin' to get the cloth away, — and there that little man would set with a tumbler of sugar and water, — what he used to call O Sukray, — a-talkin' and a-talkin', — and sometimes he would laugh, and sometimes the tears would come into his eyes, — which was a kind of grayish blue eyes, — and there he 'd set and set, and my boy Benjamin Franklin hangin' round and gettin' late for school and wantin' an excuse, and an old gentleman that 's one of my boarders, a-listenin' as if he wa'n't no older than my Ben. Franklin, and that schoolmistress settin' jest as

if she 'd been bewitched, and you might stick pins into her without her hollerin'. He was a master hand to talk when he got a-goin'. But he never would have no disputes nor long arggements at my table, and I liked him all the better for that; for I had a boarder once that never let nothin' go by without disputin' of it, till nobody knowed what he believed and what he did n't believe, only they was pretty sure he did n't believe the side he was a-disputin' for, and some of 'em said, that, if you wanted him to go any partickerlar way, you must do with him just as folks do that drive — well, them obstinate creeturs that squeal so, — for I don't like to name such creeturs in connexion with a gentleman that paid his board regular, and was a very smart man, and knowed a great deal, only his knowledge all laid crosswise, as one of 'em used to say, after t' other one had shet him up till his mouth wa'n't of no more use to him than if it had been a hole in the back of his head. This wa'n't no sech gentleman. One of my boarders used to say that he always said exactly what he was a mind to, and stuck his

idees out jest like them that sells pears outside their shop-winders, — some is three cents, some is two cents, and some is only one cent, and if you don't like, you need n't buy, but them 's the articles and them 's the prices, and if you want 'em, take 'em, and if you don't, go about your business, and don't stand mellerin' of 'em with your thumbs all day till you 've sp'ilt 'em for other folks.

He was a man that loved to stick round home as much as any cat you ever see in your life. He used to say he 'd as lief have a tooth pulled as go away anywheres. Always got sick, he said, when he went away, and never sick when he did n't. Pretty nigh killed himself goin' about lecterin' two or three winters, — talkin' in cold country lyceums, — as he used to say, — goin' home to cold parlors and bein' treated to cold apples and cold water, and then goin' up into a cold bed in a cold chamber, and comin' home next mornin' with a cold in his head as bad as the horse-distemper. Then he 'd look kind of sorry for havin' said it, and tell how kind some of the good women was to him, —

how one spread an edder-down comforter for him, and another fixed up somethin' hot for him after the lecter, and another one said, "There now, you smoke that cigar of yours after the lecter, jest as if you was at home," — and if they 'd all been like that, he 'd have gone on lectering forever, but, as it was, he had got pooty nigh enough of it, and preferred a nateral death to puttin' himself out of the world by such violent means as lecterin'.

He used to say that he was always good company enough, if he was n't froze to death, and if he was n't pinned in a cornèr so 't he could n't clear out when he 'd got as much as he wanted. But he was a dreadful uneven creetur in his talk, and I've heerd a smart young man that 's one of my boarders say, he believed he had a lid to the top of his head, and took his brains out and left 'em up stairs sometimes when he come down in the mornin'. — About his ways, he was spry and quick and impatient, and, except in a good company, — he used to say, — where he could get away at any minute, he did n't like to set still very long to once, but

wanted to be off walkin' or rowin' round in one of them queer boats of his, and he was the solitariest creetur in his goin's about (except when he could get that schoolmistress to trail round with him) that ever you see in your life. He used to say that usin' two eyes and two legs at once, and keepin' one tongue a-goin', too, was too sharp practice for him; so he had a way of dodgin' round all sorts of odd streets, I've heerd say, where he would n't meet people that would stick to him.

It did n't take much to please him. Sometimes it would be a big book he'd lug home, and sometimes it would be a mikerscope, and sometimes it would be a dreadful old-lookin' fiddle that he'd picked up somewhere, and kept a-screechin' on, sayin' all the while that it was jest as smooth as a flute. Then ag'in I'd hear him laughin' out all alone, and I'd go up and find him readin' some verses that he'd been makin'. But jest as like as not I'd go in another time, and find him cryin', — but he'd wipe his eyes and try not to show it, — and it was all nothin' but some more verses he'd been

a-writin'. I've heerd him say that it was put down in one of them ancient books, that a man must cry himself, if he wants to make other folks cry; but, says he, you can't make 'em neither laugh nor cry, if you don't try on them feelin's yourself before you send your work to the customers.

He was a temperate man, and always encouraged temperance by drinkin' jest what he was a mind to, and that was generally water. You could n't scare him with names, though. I remember a young minister that's go'n' to be, that boards at my house, askin' once what was the safest strong drink for them that had to take somethin' for the stomach's sake and thine awful infirmities. *Aqua fortis*, says he,—because you know that 'll eat your insides out, if you get it too strong, and so you always mind how much you take. Next to that, says he, rum's the safest for a wise man, and small beer for a fool.

I never mistrusted anything about him and that schoolmistress till I heerd they was keepin' company, and was go'n' to be merried. But I might have knowed it well enough by his smart-

in' himself up the way he did, and partin' the hair on the back of his head, and gettin' a blue coat with brass buttons, and wearin' them dreadful tight little French boots that used to stand outside his door to be blacked, and stickin' round schoolma'am, and follerin' of her with his eyes ; but then he was always fond of ladies, and used to sing with my daughter, and wrote his name out in a blank book she keeps, — them that has daughters of their own will keep their eyes on 'em, — and I've often heerd him say he was fond of music and picters, — and she worked a beautiful pattern for a chair of his once, that he seemed to set a good deal by ; but I ha'n't no fault to find, and there is them that my daughter likes and them that likes her.

As to schoolma'am, I ha'n't a word to say that a'n't favorable, and don't harbor no unkind feelin' to her, and never knowed them that did. When she first come to board at my house, I had n't any idee she'd live long. She was all dressed in black ; and her face looked so delicate, I expected before six months was over to see a plate of glass over it, and a Bible and a bunch

of flowers layin' on the lid of the — well, I don't like to talk about it ; for when she first come, and said her mother was dead, and she was alone in the world, except one sister out West, and onlocked her trunk and showed me her things, and took out her little purse and showed me her money, and said that was all the property she had in the world but her courage and her education, and would I take her and keep her till she could get some scholars, — I could n't say not one word, but jest went up to her and kissed her and bu'st out a-cryin' so as I never cried since I buried the last of them five children that lays in the buryin'-ground with their father, and a place for one more grown person betwixt him and the shortest of them five graves, where my baby is waitin' for its mother.

[The landlady stopped here and shed a few still tears, such as poor women who have been wrung out almost dry by fierce griefs lose calmly, without sobs or hysteric convulsions, when they show the scar of a healed sorrow.]

—— The schoolma'am had jest been killin' herself for a year and a half with waitin' and

tendin' and watchin' with that sick mother that was dead now and she was in mournin' for. *She* did n't say so, but I got the story out of her, and then I knowed why she looked so dreadful pale and poor. By and by she begun to get some scholars, and then she would come home sometimes so weak and faint that I was afraid she would drop. One day I handed her a bottle of camphire to smell of, and she took a smell of it, and I thought she 'd have fainted right away. Oh, says she, when she come to, I've breathed that smell for a whole year and more, and it kills me to breathe it again!

The fust thing that ever I see pass between the gentleman inquiries is made about, and her, was on occasion of his makin' some very searchin' remarks about griefs, sech as loss of friends and so on. I see her fix her eye steady on him, and then she kind of trembled and turned white, and the next thing I knew was she was all of a heap on the floor. I remember he looked into her face then, and seemed to be seized as if it was with a start or spasm-like, — but I thought nothin' more of it, supposin' it was because he felt so bad at makin' her faint away.

Some has asked me what kind of a young woman she was to look at. Well, folks differ as to what is likely and what is homely. I've seen them that was as pretty as picters in my eyes : cheeks jest as rosy as they could be, and hair all shiny and curly, and little mouths with lips as red as sealin'-wax, and yet one of my boarders that had a great name for makin' marble figgers would say such kind of good looks warn't of no account. I knowed a young lady once that a man drowneded himself because she would n't marry him, and she might have had her pick of a dozen, but I did n't call her anything great in the way of looks. All I can say is, that, whether she was pretty or not, she looked like a young woman that knowed what was good and had a nateral love for it, and she had about as clear an eye and about as pleasant a smile as any man ought to want for every-day company. I've seen a good many young ladies that could talk faster than she could ; but if you'd seen her or heerd her when our boardin'-house caught afire, or when there was anything to be done besides speech-makin', I guess you'd like to have stood

still and looked on, jest to see that young woman's way of goin' to work. Dark, ruther than light; and slim, but strong in the arms,—perhaps from liftin' that old mother about; for I've seen her heavin' one end of a big heavy chest round that I should n't have thought of touchin',—and yet her hands was little and white. Dressed very plain, but neat, and wore her hair smooth. I used to wonder sometimes she did n't wear some kind of ornaments, bein' a likely young woman, and havin' her way to make in the world, and seein' my daughter wearin' jewelry, which sets her off so much, every day. She never would,—nothin' but a breastpin with her mother's hair in it, and sometimes one little black cross. That made me think she was a Roman Catholic, especially when she got a picter of the Virgin Mary and hung it up in her room; so I asked her, and she shook her head and said these very words,—that she never saw a church-door so narrow she could n't go in through it, nor so wide that all the Creator's goodness and glory could enter it; and then she dropped her eyes, and went to work on

a flannel petticoat she was makin', — which I knowed, but she did n't tell me, was for a poor old woman.

I've said enough about them two boarders, but I believe it's all true. Their places is vacant, and I should be very glad to fill 'em with two gentlemen, or with a gentleman and his wife, or any respectable people, be they merried or single.

I've heerd some talk about a friend of that gentleman's comin' to take his place. That's the gentleman that he calls "the Professor," and I'm sure I hope there is sech a man; only all I can say is, I never see him, and none of my boarders ever see him, and that smart young man that I was speakin' of says he don't believe there's no sech person as him, nor that other one that he called "the Poet." I don't much care whether folks professes or makes poems, if they makes themselves agreeable, and pays their board regular. I'm a poor woman, that tries to get an honest livin', and works hard enough for it; lost my husband, and buried five children. . . .

Excuse me, dear Madam, I said, — looking at my watch, — but you spoke of certain papers which your boarder left, and which you were ready to dispose of for the pages of the “*Oceanic Miscellany*.”

The landlady's face splintered again into the wreck of the broken dimples of better days. — She should be much obleegee, if I would look at them, she said, — and went up-stairs and got a small desk containing loose papers. I looked them hastily over, and selected one of the shortest pieces, handed the landlady a check which astonished her, and send the poem thus happily obtained as an appendix to my report. If I should find others adapted to the pages of the spirited periodical which has done so much to develop and satisfy the intellectual appetite of the American public, and to extend the name of its enterprising publishers throughout the reading world, I shall present them in future numbers of the “*Oceanic Miscellany*.”

A VISIT TO THE ASYLUM FOR AGED AND DECAYED PUNSTERS.

HAVING just returned from a visit to this admirable Institution in company with a friend who is one of the Directors, we propose giving a short account of what we saw and heard. The great success of the Asylum for Idiots and Feeble-minded Youth, several of the scholars from which have reached considerable distinction, one of them being connected with a leading Daily Paper in this city, and others having served in the State and National Legislatures, was the motive which led to the foundation of this excellent Charity. Our late distinguished townsman, Noah Dow, Esquire, as is well known, bequeathed a large portion of his fortune to this establishment, — “being thereto moved,” as his will expressed it, “by the desire

of *N. Dowling* some publick Institution for the benefit of Mankind." Being consulted as to the Rules of the Institution and the selection of a Superintendent, he replied, that "all Boards must construct their own Platforms of operation. Let them select *anyhow* and he should be pleased." N. E. Howe, Esq., was chosen in compliance with this delicate suggestion.

The Charter provides for the support of "One hundred aged and decayed Gentlemen-Punsters." On inquiry if there was no provision for *females*, my friend called my attention to this remarkable psychological fact, namely : —

THERE IS NO SUCH THING AS A FEMALE PUNSTER.

This remark struck me forcibly, and on reflection I found that *I never knew nor heard of one*, though I have once or twice heard a woman make *a single detached* pun, as I have known a hen to crow.

On arriving at the south gate of the Asylum grounds, I was about to ring, but my friend held my arm and begged me to rap with my stick, which I did. An old man with a very comical

face presently opened the gate and put out his head.

“So you prefer *Cane* to *A Bell*, do you?” he said, — and began chuckling and coughing at a great rate.

My friend winked at me.

“You ’re here still, Old Joe, I see,” he said to the old man.

“Yes, yes, — and it ’s very odd, considering how often I ’ve *bolted*, nights.”

He then threw open the double gates for us to ride through.

“Now,” said the old man, as he pulled the gates after us, “you ’ve had a long journey.”

“Why, how is that, Old Joe?” said my friend.

“Don’t you see?” he answered; “there ’s the *East hinges* on one side of the gate, and there ’s the *West hinges* on t’ other side, — haw ! haw ! haw !”

We had no sooner got into the yard than a feeble little gentleman, with a remarkably bright eye, came up to us, looking very seriously, as if something had happened.

“The town has entered a complaint against the Asylum as a gambling establishment,” he said to my friend, the Director.

“What do you mean?” said my friend.

“Why, they complain that there’s a *lot o’ rye* on the premises,” he answered, pointing to a field of that grain, — and hobbled away, his shoulders shaking with laughter, as he went.

On entering the main building, we saw the Rules and Regulations for the Asylum conspicuously posted up. I made a few extracts which may be interesting.

Sect. I. OF VERBAL EXERCISES.

5. Each Inmate shall be permitted to make Puns freely from eight in the morning until ten at night, except during Service in the Chapel and Grace before Meals.

6. At ten o’clock the gas will be turned off, and no further Puns, Conundrums, or other play on words, will be allowed to be uttered, or to be uttered aloud.

9. Inmates who have lost their faculties and cannot any longer make Puns shall be permitted

to repeat such as may be selected for them by the Chaplain out of the work of Mr. *Joseph Miller*.

10. Violent and unmanageable Punsters, who interrupt others when engaged in conversation, with Puns or attempts at the same, shall be deprived of their *Joseph Millers*, and, if necessary, placed in solitary confinement.

Sect. III. OF DEPARTMENT AT MEALS.

4. No Inmate shall make any Pun, or attempt at the same, until the Blessing has been asked and the company are decently seated.

7. Certain Puns having been placed on the *Index Expurgatorius* of the Institution, no Inmate shall be allowed to utter them, on pain of being debarred the perusal of *Punch* and *Vanity Fair*, and, if repeated, deprived of his *Joseph Miller*.

Among these are the following:—

Allusions to *Attic salt*, when asked to pass the salt-cellar.

Remarks on the Inmates being *mustered*, etc., etc.

Personal allusions in connection with *carrots* and *turnips*.

Attempts upon the word *tomato*, etc., etc.

The following are also prohibited, excepting to such Inmates as may have lost their faculties, and cannot any longer make Puns of their own : —

“ ——— your own *hair* or a wig ” ; “ it will be *long enough*,” etc., etc. ; “ little of its age,” etc., etc. ; — also, playing upon the following words : *hospital* ; *mayor* ; *pun* ; *pitied* ; *bread* ; *sauce*, *sole*, etc., etc., etc. See INDEX EXPURGATORIUS, printed for use of Inmates.

The Superintendent, who went round with us, had been a noted punster in his time, and well-known in the business-world, but lost his customers by making too free with their names, — as in the famous story he set afloat in '29 of *forgeries* attaching to the names of a noted Judge, an eminent Lawyer, the Secretary of the Board of Foreign Missions, and the well-known Landlord at Springfield. One of the *four Jerries*, he added, was of gigantic magnitude.

The Superintendent showed some of his old tendencies as he went round with us.

“Do you know” — he broke out all at once — “why they don’t take steppes in Tartary for establishing Insane Hospitals?”

We both confessed ignorance.

“Because there are *nomad* people to be found there,” he said, with a dignified smile.

He proceeded to introduce us to different Inmates. The first was a middle-aged, scholarly man, who was seated at a table with a Webster’s Dictionary and a sheet of paper before him.

“Well, what luck to-day, Mr. Mowzer?” said the Superintendent.

He turned to his notes and read: —

“Don’t you see Webster *ers* in the words center and theater?”

“If he spells leather *lether*, and feather *fether*, is n’t there danger that he’ll give us a *bad spell of weather*?”

“Besides, Webster is a resurrectionist; he does not allow *u* to rést quietly in the *mould*.

“And again, because Mr. Worcester inserts

an illustration in his text, is that any reason why Mr. Webster's publishers should hitch one on in their appendix? It's what I call a *Connect-a-cut* trick.

"Why is his way of spelling like the floor of an oven? Because it is *under bread*."

"Mowzer!" said the Superintendent, — "that word is on the Index!"

"I forgot," said Mr. Mowzer; — "please don't deprive me of *Vanity Fair*, this one time, Sir.

"These are all, this morning. Good day, Gentlemen. Then to the Superintendent, — Add you, Sir!"

The next Inmate was a semi-idiotic-looking old man. He had a heap of block-letters before him, and, as we came up, he pointed, without saying a word, to the arrangements he had made with them on the table. They were evidently anagrams, and had the merit of transposing the letters of the words employed without addition or subtraction. Here are a few of them: —

TIMES.	SMITE!
POST.	STOP!
TRIBUNE.	TRUE NIB.
WORLD.	DR. OWL.
ADVERTISER.	{ RES VERI DAT. IS TRUE. READ!
ALLOPATHY.	ALL O' TH' PAY.
HOMŒOPATHY.	O, THE —! O! O, MY! PAH!

The mention of several New York papers led to two or three questions. Thus: Whether the Editor of the Tribune was *H. G. really?* If the complexion of his politics were not accounted for by his being *an eager* person himself? Whether Wendell *Fillips* were not a reduced copy of John *Knocks?* Whether a New York *Feuilletoniste* is not the same thing as a *Fellow down East?*

At this time a plausible-looking, bald-headed man joined us, evidently waiting to take a part in the conversation.

“Good morning, Mr. Riggles,” said the Superintendent. “Anything fresh this morning? Any Conundrum?”

“Nothing of any account,” he answered. “We had hasty-pudding yesterday.”

“What has that got to do with conundrums?” asked the Superintendent.

"I asked the Inmates why it was like the Prince."

"O! because it comes attended by its *sweet*," said the Superintendent.

"No," said Mr. Riggles, "it is because the 'lasses runs after it."

"Riggles is failing," said the Superintendent, as we moved on.

The next Inmate looked as if he might have been a sailor formerly.

"Ask him what his calling was," said the Superintendent.

"Followed the sea," he replied to the question put by one of us. "Went as mate in a fishing-schooner."

"Why did you give it up?"

"Because I did n't like working for *two-masters*," he replied.

Presently we came upon a group of elderly persons, gathered about a venerable gentleman with flowing locks, who was propounding questions to a row of Inmates.

"Can any Inmate give me a motto for M. Berger?" he said.

Nobody responded for two or three minutes. At last one old man, whom I at once recognized as a Graduate of our University, (Anno 1800,) held up his hand.

“Rem a *cue* tetigit.”

“Go to the head of the Class, Josselyn,” said the venerable Patriarch.

The successful Inmate did as he was told, but in a very rough way, pushing against two or three of the Class.

“How is this?” said the Patriarch.

“You told me to go up *jostlin’*,” he replied.

The old gentlemen who had been shoved about enjoyed the Pun too much to be angry.

Presently the Patriarch asked again, —

“Why was M. Berger authorized to go to the dances given to the Prince?”

The Class had to give up this, and he answered it himself:—

“Because every one of his carroms was a *tick-it* to the *ball*.”

“Who collects the money to defray the expenses of the last campaign in Italy?” asked the Patriarch.

Here again the Class failed.

“The war-cloud’s rolling *Dun*,” he answered.

“And what is mulled wine made with?”

Three or four voices exclaimed at once, —

“*Sizzle-y* Madeira!”

Here a servant entered, and said “Luncheon-time.” The old gentlemen, who have excellent appetites, dispersed at once, one of them politely asking us if we would not stop and have a bit of bread and a little mite of cheese.

“There is one thing I have forgotten to show you,” said the Superintendent, — “the cell for the confinement of violent and unmanageable Punsters.”

We were very curious to see it, particularly with reference to the alleged absence of every object upon which a play of words could possibly be made.

The Superintendent led us up some dark stairs to a corridor, then along a narrow passage, then down a broad flight of steps into another passage-way, and opened a large door which looked out on the main entrance.

“We have not seen the cell for the confine-

ment of 'violent and unmanageable' Punsters," we both exclaimed.

"This is the *sell!*" he exclaimed, pointing to the outside prospect.

My friend, the Director, looked me in the face so good-naturedly that I had to laugh.

"We like to humor the Inmates," he said. "It has a bad effect, we find, on their health and spirits to disappoint them of their little pleasantries. Some of the jests to which we have listened are not new to me, though I dare say you may not have heard them often before. The same thing happens in general society, with this additional disadvantage, that there is no punishment provided for 'violent and unmanageable' Punsters, as in our Institution."

We made our bow to the Superintendent and walked to the place where our carriage was waiting for us. On our way, an exceedingly decrepit old man moved slowly towards us, with a perfectly blank look on his face, but still appearing as if he wished to speak.

"Look!" said the Director, — "that is our Centenarian."

The ancient man crawled towards us, cocked one eye, with which he seemed to see a little, up at us, and said, —

“ Sarvant, young Gentlemen. . Why is a — a — a — like a — a — a — ? Give it up ? Because it ’s a — a — a — a — .”

He smiled a pleasant smile, as if it were all plain enough.

“ One hundred and seven last Christmas,” said the Director. “ He lost his answers about the age of ninety-eight. Of late years he puts his whole Conundrums in blank, — but they please him just as well.”

We took our departure, much gratified and instructed by our visit, hoping to have some future opportunity of inspecting the Records of this excellent Charity, and making extracts for the benefit of our Readers.

THE GREAT INSTRUMENT.

EARLY in the month of November the mysterious curtain which has hidden the work long in progress at the Boston Music Hall will be lifted, and the public will throng to look upon and listen to the GREAT ORGAN.

It is the most interesting event in the musical history of the New World. The masterpiece of Europe's master-builder is to uncover its veiled front and give voice to its long-brooding harmonies. The most precious work of Art that ever floated from one continent to the other is to be formally displayed before a great assembly. The occasion is one of well-earned rejoicing, almost of loud triumph; for it is the crowning festival which rewards an untold sum of devoted and conscientious labor, carried on, without any immediate recompense, through a

long series of years, to its now perfect consummation. The whole community will share in the deep satisfaction with which the public-spirited citizens who have encouraged this noble undertaking, and the enterprising and untiring lover of science and art who has conducted it from the first, may look upon their completed task.

What is this wondrous piece of mechanism which has cost so much time and money, and promises to become one of the chief attractions of Boston and a source of honest pride to all cultivated Americans? The organ, as its name implies, is *the instrument*, in distinction from all other and less noble instruments. We might almost think it was called organ as being a part of an unfinished *organism*, a kind of Frankenstein-creation, half framed and half vitalized. It breathes like an animal, but its huge lungs must be filled and emptied by alien force. It has a wilderness of windpipes, each furnished with its own vocal adjustment, or larynx. Thousands of long, delicate tendons govern its varied internal movements, themselves obedient

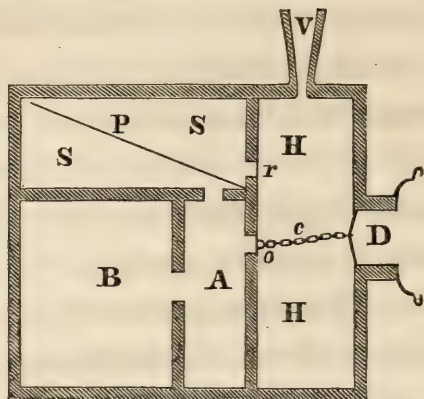
to the human muscles which are commanded by the human brain, which again is guided in its volitions by the voice of the great half-living creature. A strange cross between the form and functions of animated beings, on the one hand, and the passive conditions of inert machinery, on the other ! Its utterance rises through all the gamut of Nature's multitudinous voices, and has a note for all her outward sounds and inward moods. Its thunder is deep as that of billows that tumble through ocean-caverns, and its whistle is sharper than that of the wind through their narrowest crevice. It roars louder than the lion of the desert, and it can draw out a thread of sound as fine as the locust spins at hot noon on his still tree-top. Its clustering columns are as a forest in which every music-flowering tree and shrub finds its representative. It imitates all instruments ; it cheats the listener with the sound of singing choirs ; it strives for a still purer note than can be strained from human throats, and emulates the host of heaven with its unearthly "voice of angels." Within its breast all the passions of

humanity seem to reign in turn. It moans with the dull ache of grief, and cries with the sudden thrill of pain ; it sighs, it shouts, it laughs, it exults, it wails, it pleads, it trembles, it shudders, it threatens, it storms, it rages, it is soothed, it slumbers.

Such is the organ, man's nearest approach to the creation of a true organism.

But before the audacious conception of this instrument ever entered the imagination of man, before he had ever drawn a musical sound from pipe or string, the chambers where the royal harmonies of his grandest vocal mechanism were to find worthy reception were shaped in his own marvellous structure. The *organ* of hearing was finished by its Divine Builder while yet the morning stars sang together, and the voices of the young creation joined in their first choral symphony. We have seen how the mechanism of the artificial organ takes on the likeness of life ; we shall attempt to describe the living organ in common language by the aid of such images as our ordinary dwellings furnish us. The unscientific reader need not take notice of the words in parentheses.

The annexed diagram may render it easier to follow the description.



The structure which is to admit Sound as a visitor is protected and ornamented at its entrance by a light movable awning (the external ear). Beneath and within this opens a recess or passage (*meatus auditorius externus*), at the farther end of which is the parchment-like front-door, D (*membrana tympani*).

Beyond this is the hall or entry, H, (cavity of the *tympanum*,) which has a ventilator, V, (Eustachian tube,) communicating with the outer air, and two windows, one oval, o, (*fenestra ovalis*,) one round, r, (*fenestra rotunda*,) both filled with parchment-like membrane, and

looking upon the inner suite of apartments (labyrinth).

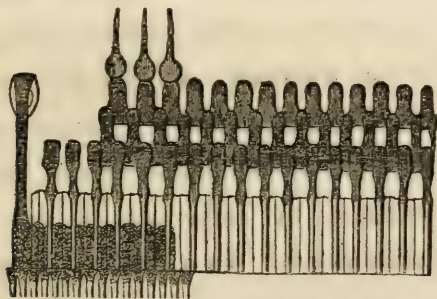
This inner suite of apartments consists of an antechamber, A, (vestibule,) an arched chamber, B, (semicircular canals,) and a spiral chamber, S, (*cochlea*,) with a partition, P, dividing it across, except for a small opening at one end. The antechamber opens freely into the arched chamber, and into one side of the partitioned spiral chamber. The other side of this spiral chamber looks on the hall by the round window already mentioned ; the oval window looking on the hall belongs to the antechamber. From the front-door to the oval window of the antechamber extends a chain, *c*, (*ossicula auditûs*,) so connected that a knock on the first is transmitted instantly to the second. But as the round window of the spiral chamber looks into the hall, the knock at the front door will also make itself heard at and through that window, being conveyed along the hall.

In each division of the inner suite of apartments are the watchmen, (branches of the auditory nerve,) listening for the approach of

Sound. The visitor at length enters the porch, and knocks at the front-door. The watchmen in the antechamber hear the blow close to them, as it is repeated, through the chain, on the window of their apartment. The impulse travels onward into the arched chamber, and startles its tenants. It is transmitted into one half of the partitioned spiral chamber, and rouses the recumbent guardians in that apartment. Some portion of it even passes the small opening in the partition, and reaches the watchmen in the other half of the room. But they also hear it through the round window, not as it comes through the chain, but as it resounds along the hall.

Thus the summons of Sound reaches all the watchmen, but not all of them through the same channels or with the same force. It is not known how their several precise duties are apportioned, but it seems probable that the watchmen in the spiral chamber observe the pitch of the audible impulse which reaches them, while the others take cognizance of its intensity and perhaps of its direction.

Such is the plan of the organ of hearing, as an architect might describe it. But the details of its special furnishing are so intricate and minute that no anatomist has proved equal to their entire and exhaustive delineation. A titled observer, the Marquis Corti, has hitherto proved most successful in describing the wonderful *key-board* found in the spiral chamber, the complex and symmetrical beauty of which is absolutely astonishing to those who study it by the aid of the microscope. The figure annexed shows a small portion of this extraordinary structure. It is from Kölliker's well-known work on Microscopic Anatomy.



Enough has been said to show that the ear is as carefully adjusted to respond to the blended

impressions of sound as the eye to receive the mingled rays of light ; and that as the telescope presupposes the lens and the retina, so the organ presupposes the resonant membranes, the labyrinthine chambers, and the delicately suspended or exquisitely spread-out nervous filaments of that other organ, whose builder is the Architect of the universe, and the Master of all its harmonies.

Not less an object of wonder is that curious piece of mechanism, the most perfect, within its limited range of powers, of all musical instruments, the *organ* of the human voice. It is the highest triumph of our artificial contrivances to reach a tone like that of a singer, and among a hundred organ-stops none excites such admiration as the *vox humana* ; a brief account of the vocal organ will not, therefore, be out of place.

The principles of the action of the larynx are easily illustrated by reference to the simpler musical instruments. In a flute or flageolet the musical sound is produced by the vibration of a column of air contained in its interior. In a clarinet or a bassoon another source of sound

is added in the form of a thin slip of wood contained in the mouth-piece, and called the *reed*, the vibrations of which give a superadded nasal thrill to the resonance of the column of air.

The human organ of voice is like the clarinet and the bassoon. The windpipe is the tube containing the column of air. The larynx is the mouth-piece containing the reed. But the reed is double, consisting of two very thin membranous edges, which are made tense or relaxed, and have the interval between them, through which the air rushes, narrowed or widened by the instinctive, automatic action of a set of little muscles. The vibration of these membranous edges (*chordæ vocales*) produces a musical sound, just as the vibration of the edge of a finger-bowl produces one when a wet finger is passed round it. The cavities of the nostrils, and their side-chambers, with their light, elastic sounding-boards of thin bone, are essential to the richness of the tone, as all singers find out when those passages are obstructed by a cold in the head.

The human voice, perfect as it may be in

tone, is yet always very deficient in compass, as is obvious from the fact that the bass voice, the barytone, the contralto, and the soprano have all different registers, and are all required to produce a complete vocal harmony. If we could make organ-pipes with movable, self-regulating lips, with self-shortening and self-lengthening tubes, so that each tube should command the two or three octaves of the human voice, a very limited number of them would be required. But as each tube has but a single note, we understand why we have those immense clusters of hollow columns. As we wish to produce different effects, sometimes using the pure flute-sounds, at other times preferring the nasal thrill of the reed-instruments, we see why some of the tubes have simple mouths and others are furnished with vibratory tongues. And, lastly, we can easily understand that the great interior spaces of the organ must of themselves furnish those resonant surfaces which we saw provided for, on a small scale, in the nasal passages, — the sounding-board of the human larynx.

The great organ of the Music Hall is a choir of nearly six thousand vocal throats. Its largest windpipes are thirty-two feet in length, and a man can crawl through them. Its finest tubes are too small for a baby's whistle. Eighty-nine *stops* produce the various changes and combinations of which its immense orchestra is capable, from the purest solo of a singing nun to the loudest chorus in which all its groups of voices have their part in the full flow of its harmonies. Like all instruments of its class, it contains several distinct systems of pipes, commonly spoken of as separate organs, and capable of being played alone or in connection with each other. Four *manuals*, or hand key-boards, and two *pedals*, or foot key-boards, command these several systems, — the *solo* organ, the *choir* organ, the *swell* organ, and the *great* organ, and the *piano* and *forte* pedal-organ. Twelve pairs of bellows, which it is intended to move by water-power, derived from the Cochituate reservoirs, furnish the breath which pours itself forth in music. Those beautiful effects, for which the organ is incomparable, the *crescendo* and *dimin-*

uendo, — the gradual rise of the sound from the lowest murmur to the loudest blast, and the dying fall by which it steals gently back into silence, — the *dissolving views*, so to speak, of harmony, — are not only provided for in the swell-organ, but may be obtained by special adjustments from the several systems of pipes and from the entire instrument.

It would be anticipating the proper time for judgment, if we should speak of the excellence of the musical qualities of the great organ before having had the opportunity of hearing its full powers displayed. We have enjoyed the privilege, granted to few as yet, of listening to some portions of the partially mounted instrument, from which we can confidently infer that its effect, when all its majestic voices find utterance, must be noble and enchanting beyond all common terms of praise. But even without such imperfect trial, we have a right, merely from a knowledge of its principles of construction, of the pre-eminent skill of its builder, of the time spent in its making, of the extraordinary means taken to insure its perfection,

and of the liberal scale of expenditure which has rendered all the rest possible, to feel sure that we are to hear the instrument which is and will probably long remain beyond dispute the first of the New World and second to none in the Old in the sum of its excellences and capacities.

The mere comparison of numbers of pipes and of stops, or of external dimensions, though it gives an approximative idea of the scale of an organ, is not so decisive as it might seem as to its real musical effectiveness. In some cases, many of the stops are rather nominal than of any real significance. Even in the Haarlem organ, which has only about two thirds as many as the Boston one, Dr. Burney says, "The variety they afford is by no means what might be expected." It is obviously easy to multiply the small pipes to almost any extent. The dimensions of an organ, in its external aspect, must depend a good deal on the height of the edifice in which it is contained. Thus, the vaulted roof of the Cathedral of Ulm permitted the builder of our Music-Hall organ to pile the

façade of the one he constructed for that edifice up to the giddy elevation of almost a hundred feet, while the famous instrument in the Town Hall of Birmingham has only three quarters of the height of our own, which is sixty feet. It is obvious, also, that the effective power of an organ does not depend merely on its size, but that the perfection of all its parts will have quite as much to do with it. In judging a vocalist, we can form but a very poor guess of the compass, force, quality of the voice, from a mere inspection of the throat and chest. In the case of the organ, however, we have the advantage of being able to minutely inspect every throat and larynx, to walk into the interior of the working mechanism, and to see the adaptation of each part to its office. In absolute power and compass the Music-Hall organ ranks among the three or four mightiest instruments ever built. In the perfection of all its parts, and in its whole arrangements, it challenges comparison with any the world can show.

Such an instrument ought to enshrine itself in an outward frame that should correspond in

some measure to the grandeur and loveliness of its own musical character. It has been a dream of metaphysicians, that the soul shaped its own body. If this many-throated singing creature could have sung itself into an external form, it could hardly have moulded one more expressive of its own nature. We must leave to those more skilled in architecture the detailed description of that noble *façade* which fills the eye with music as the voices from behind it fill the mind through the ear with vague, dreamy pictures. For us it loses all technical character in its relations to the soul of which it is the body. It is as if a glorious anthem had passed into outward solid form in the very ecstasy of its grandest chorus. Milton has told us of such a miracle, wrought by fallen angels, it is true, but in a description rich with all his opulence of caressing and ennobling language :—

“ Anon out of the earth a fabric huge
 Rose, like an exhalation, with the sound
 Of dulcet symphonies and voices sweet,
 Built like a temple, where pilasters round
 • Were set, and Doric pillars overlaid
 With golden architrave; nor did there want
 Cornice or frieze with bossy sculptures graven.”

The structure is of black walnut, and is covered with carved statues, busts, masks, and figures in the boldest relief. In the centre a richly ornamented arch contains the niche for the key-boards and stops. A colossal mask of a singing woman looks from over its summit. The pediment above is surmounted by the bust of Johann Sebastian Bach. Behind this rises the lofty central division, containing pipes, the arch over which bears a fine mask of Apollo, and crowning it is a beautiful sitting statue of Saint Cecilia, holding her lyre. On each side of her a griffin sits as guardian. This centre is connected by harp-shaped compartments, filled with pipes, to the two great round towers, one on each side, and each of them containing three colossal pipes. These magnificent towers come boldly forward into the hall, being the most prominent, as they are the highest and stateliest, part of the *façade*. At the base of each a gigantic half-caryatid, in the style of the ancient *hermæ*, but finished to the waist, bends beneath the superincumbent weight, like Atlas under the globe. These figures are of wonderful force,

the muscular development almost excessive, but in keeping with their superhuman task. At each side of the base two lion-*hermæ* share in the task of the giant. Over the base rise the round pillars which support the dome and enclose the three great pipes already mentioned. Graceful as these look in their position, half a dozen men might creep into one of them and lie hidden. A man of six feet high went up a ladder, and standing at the base of one of them could just reach to put his hand into the mouth at its lower part above the conical foot. The three great pipes are crowned by a heavily sculptured, ribbed, rounded dome, and this is surmounted, on each side, by two cherubs, whose heads almost touch the lofty ceiling. This whole portion of the sculpture is of eminent beauty. The two exquisite cherubs of one side are playing on the lyre and the lute; those of the other side on the flute and the horn. All the reliefs that run round the lower portion of the dome are of singular richness. We have had an opportunity of seeing one of the artist's photographs, which showed in detail the full-length

figures and the large central mask of this portion of the work, and found them as beautiful on close inspection as the originals at a distance.

Two other lateral compartments, filled with pipes and still more suggestive of the harp in their form, lead to the square lateral towers. Over these compartments, close to the round tower, sits on each side a harper, a man on the right, a woman on the left, with their harps, all apparently of natural size. The square towers, holding pipes in their open interior, are lower than the round towers, and fall somewhat back from the front. Below, three colossal *hermæ* of Sibyl-like women perform for them the office which the giants and the lion-shapes perform for the round towers. The four pillars which rise from the base are square, and the dome which surmounts them is square also. Above the dome is a vase-like support, upon which are disposed figures of the lyre and other musical symbols.

The whole base of the instrument, in the intervals of the figures described, is covered with elaborate carvings. Groups of musical instruments, standing out almost detached from the

background, occupy the panels. Ancient and modern, clustered with careless grace and quaint variety, from the violin down to a string of sleigh-bells, they call up all the echoes of forgotten music, such as the thousand-tongued organ blends together in one grand harmony.

The instrument is placed upon a low platform, the outlines of which are in accordance with its own. Its whole height is about sixty feet, its breadth forty-eight feet, and its average depth twenty-four feet. Some idea of its magnitude may be got from the fact that the wind-machinery and the swell-organ alone fill up the whole recess occupied by the former organ, which was not a small one. All the other portions of the great instrument come forward into the hall.

In front of its centre stands Crawford's noble bronze statue of Beethoven, the gift of our townsman, Mr. Charles Perkins. It might be suggested that so fine a work of Art should have a platform wholly to itself; but the eye soon reconciles itself to the position of the statue, and the tremulous atmosphere which

surrounds the vibrating organ is that which the almost breathing figure would seem to delight in, as our imagination invests it with momentary consciousness.

As we return to the impression produced by the grand *façade*, we are more and more struck with the subtile art displayed in its adaptations and symbolisms. Never did any structure we have looked upon so fully justify Madame de Staël's definition of architecture, as "frozen music." The outermost towers, their pillars and domes, are all *square*, their outlines thus passing without too sudden transitions from the sharp square angles of the vaulted ceiling and the rectangular lines of the walls of the hall itself into the more central parts of the instrument, where a smoother harmony of outline is predominant. For in the great towers, which step forward, as it were, to represent the meaning of the entire structure, the lines are all curved, as if the slight discords which gave sharpness and variety to its less vital portions were all resolved as we approached its throbbing heart. And again, the half fantastic repetitions

of musical forms in the principal outlines, — the lyre-like shape of the bases of the great towers, the harp-like figure of the connecting wings, the clustering reeds of the columns, — fill the mind with musical suggestions, and dispose the wondering spectator to become the entranced listener.

The great organ would be but half known, if it were not played in a place fitted for it in dimensions. In the open air the sound would be diluted and lost; in an ordinary hall the atmosphere would be churned into a mere tumult by the vibrations. The Boston Music Hall is of ample size to give play to the waves of sound, yet not so large that its space will not be filled and saturated with the overflowing resonance. It is one hundred and thirty feet in length by seventy-eight in breadth and sixty-five in height, being thus of somewhat greater dimensions than the celebrated Town Hall of Birmingham. At the time of building it, (1852,) its great height was ordered partly with reference to the future possibility of its being furnished with a large organ. It will be

observed that the three dimensions above given are all multiples of the same number, thirteen, the length being ten times, the breadth six times and the height five times this number. This is in accordance with Mr. Scott Russell's recommendation, which has been explained by the fact that vibrating solids divide into *harmonic lengths*, separated by *nodal points* of rest, and that these last are equally distributed at aliquot parts of its whole length. If the whole extent of the walls be in vibration, its angles should come in at the nodal points in order to avoid the confusion arising from different vibrating lengths ; and for this reason they are placed at aliquot parts of its entire length. Thus the hall is itself a kind of passive musical instrument, or at least a sounding-board, constructed on theoretical principles. Whatever is thought of the theory, it proves in practice to possess the excellence which is liable to be lost in the construction of the best-designed edifice.

We have thus attempted to give our readers some imperfect idea of the great instrument,

illustrating it by the objects of comparison with which we are most familiar, and leaving to others the more elaborate work of subjecting it to a thorough artistic survey, and the rigorous analysis necessary to bring out the various degrees of excellence in its special qualities, which, as in a human character, will be found to mark its individuality. We shall proceed to give some account of the manner in which the plan of obtaining the best instrument the Old World could furnish to the New was formed, matured, and carried into successful execution.

It is mainly to the persistent labors of a single individual that our community is indebted for the privilege it now enjoys in possessing an instrument of the supreme order, such as make cities illustrious by their presence. That which is on the lips of all it can wrong no personal susceptibilities to tell in print; and when we say that Boston owes the Great Organ chiefly to the personal efforts of the present President of the Music-Hall Association, Dr. J. Baxter Upham, the statement is only for the information of distant readers.

Dr. Upham is widely known to the medical profession in connection with important contributions to practical science. His researches on typhus-fever, as observed by him at different periods, during and since the years 1847 and 1848, in this country, and as seen at Dublin and in the London Fever Hospital, were recognized as valuable contributions to the art of medicine. More recently, as surgeon in charge of the Stanley General Hospital, Eighteenth Army Corps, he has published an account of the "Congestive Fever" prevailing at Newbern, North Carolina, during the winter and spring of 1862-63. We must add to these practical labors the record of his most ingenious and original investigations of the circulation in the singular case of M. Groux, which had puzzled so many European experts, and to which, with the tact of a musician, he applied the electro-magnetic telegraphic apparatus so as to change the rapid consecutive motions of different parts of the heart, which puzzled the eye, into successive *sounds* of a character which the ear could recognize in their order. It was during these experiments, many

of which we had the pleasure of witnessing, that the "side-show" was exhibited of counting the patient's pulse, through the wires, at the Observatory in Cambridge, while it was beating in Dr. Upham's parlor in Boston. Nor should we forget that other ingenious contrivance of his, the system of *sound-signals*, devised during his recent term of service as surgeon, and applied with the most promising results, as a means of intercommunication between different portions of the same armament.

In the summer of 1853, less than a year after the Music Hall was opened to the public, Dr. Upham, who had been for some time occupied with the idea of procuring an organ worthy of the edifice, made a tour in Europe with the express object of seeing some of the most famous instruments of the Continent and of Great Britain. He examined many, especially in Germany, and visited some of the great organ-builders, going so far as to obtain specifications from Mr. Walcker of Ludwigsburg, and from Weigl, his pupil at Stuttgart. On returning to this country, he brought the proposition of pro-

curing a great instrument in Europe in various ways before the public, among the rest by his "Reminiscences of a Summer Tour," published in "Dwight's Journal of Music." After this he laid the matter before the members of the Harvard Musical Association, and, having thus gradually prepared the way, presented it for consideration before the Board of Directors of the Music-Hall Association. A committee was appointed "to consider." There was some division of opinion as to the expediency of the more ambitious plan of sending abroad for a colossal instrument. There was a majority report in its favor, and a verbal minority report advocating a more modest instrument of home manufacture. Then followed the anacondatorpor which marks the process of digestion of a huge and as yet crude project by a multiver-tebrate corporation.

On the first of March, 1856, the day of the inauguration of Beethoven's statue, a subscription-paper was started, headed by Dr. Upham, for raising the sum of ten thousand dollars. At a meeting in June the plan was brought before

the stockholders of the Music Hall, who unanimously voted to appropriate ten thousand dollars and the proceeds of the old organ, on condition that fifteen thousand dollars should be raised by private subscription. In October it was reported to the Directors that ten thousand dollars of this sum were already subscribed, and Dr. Upham, President of the Board, pledged himself to raise the remainder on certain conditions, which were accepted. He was then authorized to go abroad to investigate the whole subject, with full powers to select the builder and to make the necessary contracts.

Dr. Upham had already made an examination of the best organs and organ-factories in New England, New York, and elsewhere in this country, and received several specifications and plans from builders. He proceeded at once, therefore, to Europe, examined the great English instruments, made the acquaintance of Mr. Hopkins, the well-known organist and recognized authority on all matters pertaining to the instrument, and took lessons of him in order to know better the handling of the keys and the

resources of the instrument. In his company, Dr. Upham examined some of the best instruments in London. He made many excursions among the old churches of Sir Christopher Wren's building, where are to be found the fine organs of "Father Smith," John Snetzler, and other famous builders of the past. He visited the workshops of Hill, Gray and Davidson, Willis, Robson and others. He made a visit to Oxford to examine the beautiful organ in Trinity College. He found his way into the organ-lofts of St. Paul's, of Westminster Abbey, and the Temple Church, during the playing at morning and evening service. He inspected Thompson's *enharmonic* organ, and obtained models of various portions of organ-structure.

From London Dr. Upham went to Holland, where he visited the famous instruments at Haarlem, Amsterdam, and Rotterdam, and the organ-factory at Utrecht, the largest and best in Holland. Thence to Cologne, where, as well as at Utrecht, he obtained plans and schemes of instruments; to Hamburg, where are fine old organs, some of them built two or three centu-

ries ago ; to Lubeck, Dresden, Breslau, Leipsic, Halle, Merseburg. Here he found a splendid organ built by Ladergast, whose instruments excel especially in their tone effects. A letter from Liszt, the renowned pianist, recommended this builder particularly to Dr. Upham's choice. At Frankfort and at Stuttgart he found two magnificent instruments, built by Walcker of Ludwigsburg, to which place he repaired in order to examine his factories carefully, for the second time. Thence the musical tourist proceeded to Ulm, where is the sumptuous organ, the work of the same builder, ranking, we believe, first in point of dimensions of all in the world. Onward still, to Munich, Bamberg, Augsburg, Nuremberg, along the Lake of Constance to Weingarten, where is that great organ claiming to have sixty-six stops and six thousand six hundred and sixty-six pipes ; to Freyburg, in Switzerland, where is another great organ, noted for the rare beauty of its *vox-humana* stop, the mechanism of which had been specially studied by Mr. Walcker, who explained it to Dr. Upham.

Returning to Ludwigsburg, Dr. Upham received another specification from Mr. Walcker. He then passed some time at Frankfort examining the specifications already received, and the additional ones which came to him while there.

At last, by the process of exclusion, the choice was narrowed down to three names, Schultze, Ladergast, and Walcker, then to the two last. There was still a difficulty in deciding between these. Dr. Upham called in Mr. Walcker's partner and son, who explained every point on which he questioned them with the utmost minuteness. Still undecided, he revisited Merseburg and Weissenfels, to give Ladergast's instruments another trial. The result was that he asked Mr. Walcker for a third specification, with certain additions and alterations which he named. This he received, and finally decided in his favor, — but with the condition that Mr. Walcker should meet him in Paris for the purpose of examining the French organs with reference to any excellences of which he might avail himself, and afterwards proceed to London and inspect the English instruments with the same object.

The details of this joint tour are very interesting, but we have not space for them. The frank enthusiasm with which the great German organ-builder was welcomed in France contrasted forcibly with the quiet, not to say cool, way in which the insular craftsmen received him, gradually, however, warming, and at last, with a certain degree of effort, admitting him to their confidence.

A fortnight was spent by Dr. Upham in company with Walcker and Mr. Hopkins in studying and perfecting the specification, which was at last signed in German and English, and stamped with the notarial seal, and thus the contract made binding.

A long correspondence relating to the instrument followed between Dr. Upham, the builder, and Mr. Hopkins, ending only with the shipment of the instrument. A most interesting part of this was Dr. Upham's account of his numerous original experiments with the natural larynx, made with reference to determining the conditions requisite for the successful imitation of the human voice in the arrangement called

vox humana. Mr. Walcker has availed himself of the results of these experiments in the stop as made for this organ, but with what success we are unable to say, as the pipes have not been set in place at the time of our writing. As there is always great curiosity to hear this particular stop, we will guard our readers against disappointment by quoting a few remarks about that of the Haarlem organ, made by the liveliest of musical writers, Dr. Burney.

“As to the *vox humana*, which is so celebrated, it does not at all resemble a human voice, though a very good stop of the kind ; but the world is very apt to be imposed upon by names ; the instant a common hearer is told that an organist is playing upon a stop which resembles the human voice, he supposes it to be very fine, and never inquires into the propriety of the name, or exactness of the imitation. However, with respect to our own feelings, we must confess, that, of all the stops which we have yet heard, that have been honored with the appellation of *vox humana*, no one in the treble part has ever reminded us of anything human, so

much as the cracked voice of an old woman of ninety, or, in the lower parts, of Punch singing through a comb." Let us hope that this most irreverent description will not apply to the *vox humana* of our instrument, after all the science and skill that have been expended upon it. Should it prove a success like that of the Freiburg organ, there will be pilgrimages from the shores of the Pacific and the other side of the Atlantic to listen to the organ that can *sing*, and what can be a more miraculous triumph of art than to cheat the ear with such an enchanting delusion.

Before the organ could be accepted, it was required by the terms of the contract to be set up at the factory, and tested by three persons: one to be selected by the Organ Committee of the Music-Hall Association, one by the builder, and a third to be chosen by them. Having been approved by these judges, and also by the State-Commissioner of Würtemberg, according to the State ordinance, the result of the trial was transmitted to the President and Directors of the Music-Hall Association, and the organ was accepted.

The war broke out in the mean time, and there were fears lest the vessel in which the instrument might be shipped should fall a victim to some of the British corsairs sailing under Confederate colors. But the Dutch brig "Presto," though slow, was safe from the licensed pirates, unless an organ could be shown to be contraband of war. She was out so long, however, — nearly three months from Rotterdam, — that the insurance-office presidents shook their heads over her, fearing that she had gone down with all her precious freight.

"At length," to borrow Dr. Upham's words, "one stormy Sunday in March she was telegraphed from the marine station down in the bay, and the next morning, among the marine intelligence, in the smallest possible type, might be read the invoice of her cargo thus: —

"Sunday Mar. 22

"Arr. Dutch brig Presto, Van Wyngarten, Rotterdam, Jan. 1 Helvoet, 10th Had terrific gales from SW the greater part of the passage. 40 casks gin J D & M Williams 8 sheep Chenery & Co 200 bags coffee 2 casks herrings 1 case cheese W. Winsel 1 organ J B Upham 20 pipes 6 casks gin J D Richards 6 casks nutmegs J Schumaker 20 do gin 500 bags chickory root order,' etc., etc.

And this was the heralding of this greatest marvel of a high and noble art, after the labor of seven years bestowed upon it, having been

tried and pronounced complete by the most fastidious and competent of critics, the wonder and admiration of music-loving Germany, the pride of Württemberg, bringing a new phase of civilization to our shores in the darkest hour of our country's trouble."

It remains to give a brief history of the construction of the grand and imposing architectural frame which we have already attempted to describe. Many organ-fronts were examined with reference to their effects, during Dr. Upham's visits, of which we have traced the course, and photographs and sketches obtained for the same purpose. On returning, the task of procuring a fitting plan was immediately undertaken. We need not detail the long series of trials which were necessary before the requirements of the President and Directors of the Music-Hall Association were fully satisfied. As the result of these, it was decided that the work should be committed to the brothers Herter, of New York, European artists, educated at the Royal Academy of Art in Stuttgart. The general outline

of the *façade* followed a design made by Mr. Hammatt Billings, to whom also are due the drawings from which the Saint Cecilia and the two groups of cherubs upon the round towers were modelled. These figures were executed at Stuttgart; the other carvings were all done in New York, under Mr. Herter's direction, by Italian and German artists, one of whom had trained his powers particularly to the shaping of colossal figures. In the course of the work, one of the brothers Herter visited Ludwigsburg for the special purpose of comparing his plans with the structure to which they were to be adapted, and was received with enthusiasm, the design for the front being greatly admired.

The contract was made with Mr. Herter in April, 1860, and the work, having been accepted, was sent to Boston during the last winter, and safely stored in the lecture-room beneath the Music Hall. In March the *Great Work* arrived from Germany, and was stored in the hall above.

“ The seven years' task is done, — the danger

from flood and fire so far escaped, — the gantlet of the pirates safely run, — the perils of the sea and the rail surmounted by *the good Providence of God.*”

The devout gratitude of the President of the Association, under whose auspices this great undertaking has been successfully carried through, will be shared by all lovers of Art and all the friends of American civilization and culture. We cannot naturalize the Old World cathedrals, for they were the architectural embodiment of a form of worship belonging to other ages and differently educated races. But the organ was only lent to human priesthoods for their masses and requiems; it belongs to Art, a religion of which God himself appoints the high-priests. At first it appears almost a violence to transplant it from those awful sanctuaries, out of whose arches its forms seemed to grow, and whose echoes seemed to hold converse with it, into our gay and gilded halls, to utter its majestic voice before the promiscuous multitude. Our hasty impression is a wrong one. We have undertaken, for the first time in the world's history,

to educate a nation. To teach a people to know the Creator in His glorious manifestations through the wondrous living organs is a task for which no implement of human fabrication is too sacred ; for all true culture is a form of worship, and to every rightly ordered mind a setting forth of the Divine glory.

This consummate work of science and skill reaches us in the midst of the discordant sounds of war, the prelude of that blessed harmony which will come whenever the jarring organ of the State has learned once more to obey its keys.

God grant that the *Miserere* of a people in its anguish may soon be followed by the *Te Deum* of a redeemed nation !

THE INEVITABLE TRIAL.*

IT is our first impulse, upon this returning day of our nation's birth, to recall whatever is happiest and noblest in our past history, and to join our voices in celebrating the statesmen and the heroes, the men of thought and the men of action, to whom that history owes its existence. In other years this pleasing office may have been all that was required of the holiday speaker. But to-day, when the very life of the nation is threatened, when clouds are thick about us, and men's hearts are throbbing with passion, or failing with fear, it is the living question of the hour, and not the dead story of the past, which forces itself into all minds, and will find unrebuked debate in all assemblies.

* An Oration delivered before the City Authorities of Boston, on the 4th of July, 1863.

In periods of disturbance like the present, many persons who sincerely love their country and mean to do their duty to her disappoint the hopes and expectations of those who are actively working in her cause. They seem to have lost whatever moral force they may have once possessed, and to go drifting about from one profitless discontent to another, at a time when every citizen is called upon for cheerful, ready service. It is because their minds are bewildered, and they are no longer truly themselves. Show them the path of duty, inspire them with hope for the future, lead them upwards from the turbid stream of events to the bright, translucent springs of eternal principles, strengthen their trust in humanity and their faith in God, and you may yet restore them to their manhood and their country.

At all times, and especially on this anniversary of glorious recollections and kindly enthusiasms, we should try to judge the weak and wavering souls of our brothers fairly and generously. The conditions in which our vast community of peace-loving citizens find themselves

are new and unprovided for. Our quiet burghers and farmers are in the position of river-boats blown from their moorings out upon a vast ocean, where such a typhoon is raging as no mariner who sails its waters ever before looked upon. If their beliefs change with the veering of the blast, if their trust in their fellow-men, and in the course of Divine Providence, seems well-nigh shipwrecked, we must remember that they were taken unawares, and without the preparation which could fit them to struggle with these tempestuous elements. In times like these the faith is the man ; and they to whom it is given in larger measure owe a special duty to those who for want of it are faint at heart, uncertain in speech, feeble in effort, and purposeless in aim.

Assuming without argument a few simple propositions, — that self-government is the natural condition of an adult society, as distinguished from the immature state, in which the temporary arrangements of monarchy and oligarchy are tolerated as conveniences ; that the end of all social compacts is, or ought to be, to give every

child born into the world the fairest chance to make the most and the best of itself that laws can give it ; that Liberty, the one of the two claimants who swears that her babe shall not be split in halves and divided between them, is the true mother of this blessed Union ; that the contest in which we are engaged is one of principles overlaid by circumstances ; that the longer we fight, and the more we study the movements of events and ideas, the more clearly we find the moral nature of the cause at issue emerging in the field and in the study ; that all honest persons with average natural sensibility, with respectable understanding, educated in the school of northern teaching, will have eventually to range themselves in the armed or unarmed host which fights or pleads for freedom, as against every form of tyranny ; if not in the front rank now, then in the rear rank by and by ; — assuming these propositions, as many, perhaps most of us, are ready to do, and believing that the more they are debated before the public the more they will gain converts, we owe it to the timid and the doubting to keep the great questions of the time

in unceasing and untiring agitation. They must be discussed, in all ways consistent with the public welfare, by different classes of thinkers ; by priests and laymen ; by statesmen and simple voters ; by moralists and lawyers ; by men of science and uneducated hand-laborers ; by men of facts and figures, and by men of theories and aspirations ; in the abstract and in the concrete ; discussed and rediscussed every month, every week, every day, and almost every hour, as the telegraph tells us of some new upheaval or subsidence of the rocky base of our political order.

Such discussions may not be necessary to strengthen the convictions of the great body of loyal citizens. They may do nothing toward changing the views of those, if such there be, as some profess to believe, who follow politics as a trade. They may have no hold upon that class of persons who are defective in moral sensibility, just as other persons are wanting in an ear for music. But for the honest, vacillating minds, the tender consciences supported by the tremulous knees of an infirm intelligence, the

timid compromisers who are always trying to curve the straight lines and round the sharp angles of eternal law, the continual debate of these living questions is the one offered means of grace and hope of earthly redemption. And thus a true, unhesitating patriot may be willing to listen with patience to arguments which he does not need, to appeals which have no special significance for him, in the hope that some less clear in mind or less courageous in temper may profit by them.

As we look at the condition in which we find ourselves on this fourth day of July, 1863, at the beginning of the Eighty-eighth Year of American Independence, we may well ask ourselves what right we have to indulge in public rejoicings. If the war in which we are engaged is an accidental one, which might have been avoided but for our fault ; if it is for any ambitious or unworthy purpose on our part ; if it is hopeless, and we are madly persisting in it ; if it is our duty and in our power to make a safe and honorable peace, and we refuse to do it ; if

our free institutions are in danger of becoming subverted, and giving place to an irresponsible tyranny ; if we are moving in the narrow circles which are to engulf us in national ruin, — then we had better sing a dirge, and leave this idle assemblage, and hush the noisy cannon which are reverberating through the air, and tear down the scaffolds which are soon to blaze with fiery symbols ; for it is mourning and not joy that should cover the land ; there should be silence, and not the echo of noisy gladness, in our streets ; and the emblems with which we tell our nation's story and prefigure its future should be traced, not in fire, but in ashes.

If, on the other hand, this war is no accident, but an inevitable result of long-incubating causes ; inevitable as the cataclysms that swept away the monstrous births of primeval nature ; if it is for no mean, unworthy end, but for national life, for liberty everywhere, for humanity, for the kingdom of God on earth ; if it is not hopeless, but only growing to such dimensions that the world shall remember the final triumph of right throughout all time ; if there is no safe

and honorable peace for us but a peace proclaimed from the capital of every revolted province in the name of the sacred, inviolable Union ; if the fear of tyranny is a phantasm, conjured up by the imagination of the weak, acted on by the craft of the cunning ; if so far from circling inward to the gulf of our perdition, the movement of past years is reversed, and every revolution carries us farther and farther from the centre of the vortex, until, by God's blessing, we shall soon find ourselves freed from the outermost coil of the accursed spiral ; if all these things are true ; if we may hope to make them seem true, or even probable, to the doubting soul, in an hour's discourse, — then we may join without madness in the day's exultant festivities ; the bells may ring, the cannon may roar, the incense of our harmless saltpetre fill the air, and the children who are to inherit the fruit of these toiling, agonizing years, go about unblamed, making day and night vocal with their jubilant patriotism.

The struggle in which we are engaged was

inevitable ; it might have come a little sooner, or a little later, but it must have come. The disease of the nation was organic, and not functional, and the rough chirurgery of war was its only remedy.

In opposition to this view, there are many languid thinkers who lapse into a forlorn belief that if this or that man had never lived, or if this or that other man had not ceased to live, the country might have gone on in peace and prosperity, until its felicity merged in the glories of the millennium. If Mr. Calhoun had never proclaimed his heresies ; if Mr. Garrison had never published his paper ; if Mr. Phillips, the *Cassandra* in masculine shape of our long prosperous *Ilium*, had never uttered his melodious prophecies ; if the silver tones of Mr. Clay had still sounded in the senate-chamber to smooth the billows of contention ; if the Olympian brow of Daniel Webster had been lifted from the dust to fix its awful frown on the darkening scowl of rebellion, — we might have been spared this dread season of convulsion. All this is but simple Martha's faith, without the reason she

could have given: "If Thou hadst been here, my brother had not died."

They little know the tidal movements of national thought and feeling, who believe that they depend for existence on a few swimmers who ride their waves. It is not Leviathan that leads the ocean from continent to continent, but the ocean which bears his mighty bulk as it wafts its own bubbles. If this is true of all the narrower manifestations of human progress, how much more must it be true of those broad movements in the intellectual and spiritual domain which interest all mankind? But in the more limited ranges referred to, no fact is more familiar than that there is a simultaneous impulse acting on many individual minds at once, so that genius comes in clusters, and shines rarely as a single star. You may trace a common motive and force in the pyramid-builders of the earliest recorded antiquity, in the evolution of Greek architecture, and in the sudden springing up of those wondrous cathedrals of the twelfth and following centuries, growing out of the soil with stem and bud and blossom, like flowers of stone

whose seeds might well have been the flaming aerolites cast over the battlements of heaven. You may see the same law showing itself in the brief periods of glory which make the names of Pericles and Augustus illustrious with reflected splendors ; in the painters, the sculptors, the scholars of "Leo's golden days" ; in the authors of the Elizabethan time ; in the poets of the first part of this century following that dreary period, suffering alike from the silence of Cowper and the song of Hayley. You may accept the fact as natural, that Zwingli and Luther, without knowing each other, preached the same reformed gospel ; that Newton, and Hooke, and Halley, and Wren arrived independently of each other at the great law of the diminution of gravity with the square of the distance ; that Leverrier and Adams felt their hands meeting, as it were, as they stretched them into the outer darkness beyond the orbit of Uranus, in search of the dim, unseen planet ; that Fulton and Bell, that Wheatstone and Morse, that Daguerre and Niepce, were moving almost simultaneously in parallel paths to the same end. You see

why Patrick Henry, in Richmond, and Samuel Adams, in Boston, were startling the crown officials with the same accents of liberty, and why the Mecklenburg Resolutions had the very ring of the Protest of the Province of Massachusetts. This law of simultaneous intellectual movement, recognized by all thinkers, expatiated upon by Lord Macaulay and by Mr. Herbert Spencer among recent writers, is eminently applicable to that change of thought and feeling, which necessarily led to the present conflict.

The antagonism of the two sections of the Union was not the work of this or that enthusiast or fanatic. It was the consequence of a movement in mass of two different forms of civilization in different directions, and the men to whom it was attributed were only those who represented it most completely, or who talked longest and loudest about it. Long before the accents of those famous statesmen referred to ever resounded in the halls of the Capitol, long before the "Liberator" opened its batteries, the controversy now working itself out by trial of battle, was foreseen and predicted. Washington

warned his countrymen of the danger of sectional divisions, well knowing the line of cleavage that ran through the seemingly solid fabric. Jefferson foreshadowed the judgment to fall upon the land for its sins against a just God. Andrew Jackson announced a quarter of a century beforehand that the next pretext of revolution would be slavery. De Tocqueville recognized with that penetrating insight which analyzed our institutions and conditions so keenly, that the Union was to be endangered by slavery, not through its interests, but through the change of character it was bringing about in the people of the two sections, the same fatal change which George Mason, more than half a century before, had declared to be the most pernicious effect of the system, adding the solemn warning, now fearfully justifying itself in the sight of his descendants, that "by an inevitable chain of causes and effects, Providence punishes national sins by national calamities." The Virginian romancer pictured the far-off scenes of the conflict which he saw approaching, as the prophets of Israel painted the coming woes of Jerusalem, and the

strong iconoclast of Boston announced the very year when the curtain should rise on the yet unopened drama.

The wise men of the past, and the shrewd men of our own time, who warned us of the calamities in store for our nation, never doubted what was the cause which was to produce first alienation and finally rupture. The descendants of the men "daily exercised in tyranny," the "petty tyrants," as their own leading statesmen called them long ago, came at length to love the institution which their fathers had condemned while they tolerated. It is the fearful realization of that vision of the poet where the lost angels snuff up with eager nostrils the sulphurous emanations of the bottomless abyss, — so have their natures become changed by long breathing the atmosphere of the realm of darkness.

At last, in the fulness of time, the fruits of sin ripened in a sudden harvest of crime. Violence stalked into the senate-chamber, theft and perjury wound their way into the cabinet, and, finally, openly organized conspiracy, with

force and arms, made burglarious entrance into a chief stronghold of the Union. That the principle which underlay these acts of fraud and violence should be irrevocably recorded with every needed sanction, it pleased God to select a chief ruler of the false government to be its Messiah to the listening world. As with Pharaoh, the Lord hardened his heart, while he opened his mouth, as of old he opened that of the unwise animal ridden by cursing Balaam. Then spake Mr. "Vice-President" Stephens those memorable words which fixed forever the theory of the new social order. He first lifted a degraded barbarism to the dignity of a philosophic system. He first proclaimed the gospel of eternal tyranny as the new revelation which Providence had reserved for the western Palestine. Hear, O heavens! and give ear, O earth! The corner-stone of the new-born dispensation is the recognized inequality of races; not that the strong may protect the weak, as men protect women and children, but that the strong may claim the authority of Nature and of God to buy, to sell, to scourge, to hunt, to cheat out of

the reward of his labor, to keep in perpetual ignorance, to blast with hereditary curses throughout all time, the bronzed foundling of the New World, upon whose darkness has dawned the star of the occidental Bethlehem !

After two years of war have consolidated the opinion of the Slave States, we read in the "Richmond Examiner": "The establishment of the Confederacy is verily a distinct reaction against the whole course of the mistaken civilization of the age. For 'Liberty, Equality, Fraternity,' we have deliberately substituted Slavery, Subordination, and Government."

A simple diagram, within the reach of all, shows how idle it is to look for any other cause than slavery as having any material agency in dividing the country. Match the two broken pieces of the Union, and you will find the fissure that separates them zigzagging itself half across the continent like an isothermal line, shooting its splintery projections, and opening its re-entering angles, not merely according to the limitations of particular States, but as a county or other limited section of ground belongs to freedom or

to slavery. Add to this the official statement made in 1862, that "there is not one regiment or battalion, or even company of men, which was organized in or derived from the Free States or Territories, anywhere, against the Union"; throw in gratuitously Mr. Stephens's explicit declaration in the speech referred to, and we will consider the evidence closed for the present on this count of the indictment.

In the face of these predictions, these declarations, this line of fracture, this precise statement, testimony from so many sources, extending through several generations, as to the necessary effect of slavery, *a priori*, and its actual influence as shown by the facts, few will suppose that anything *we* could have done would have stayed its course or prevented it from working out its legitimate effects on the white subjects of its corrupting dominion. Northern acquiescence or even sympathy may have sometimes helped to make it sit more easily on the consciences of its supporters. Many profess to think that Northern fanaticism, as they call it, acted like a mordant in fixing the black dye of slavery in

regions which would but for that have washed themselves free of its stain in tears of penitence. It is a delusion and a snare to trust in any such false and flimsy reasons where there is enough and more than enough in the institution itself to account for its growth. Slavery gratifies at once the love of power, the love of money, and the love of ease ; it finds a victim for anger who cannot smite back his oppressor ; and it offers to all, without measure, the seductive privileges which the Mormon gospel reserves for the true believers on earth, and the Bible of Mahomet only dares promise to the saints in heaven.

Still it is common, common even to vulgarity, to hear the remark that the same gallows-tree ought to bear as its fruit the arch-traitor and the leading champion of aggressive liberty. The mob of Jerusalem was not satisfied with its two crucified thieves ; it must have a cross also for the reforming Galilean, who interfered so rudely with its conservative traditions ! It is asserted that the fault was quite as much on our side as on the other ; that our agitators and abolishers kindled the flame for which the combustibles

were all ready on the other side of the border. If these men could have been silenced, our brothers had not died.

Who are the persons that use this argument ? They are the very ones who are at the present moment most zealous in maintaining the right of free discussion. At a time when every power the nation can summon is needed to ward off the blows aimed at its life, and turn their force upon its foes, — when a false traitor at home may lose us a battle by a word, and a lying newspaper may demoralize an army by its daily or weekly *stillicidium* of poison, they insist with loud acclaim upon the liberty of speech and of the press ; liberty, nay license, to deal with government, with leaders, with every measure, however urgent, in any terms they choose, to traduce the officer before his own soldiers, and assail the only men who have any claim at all to rule over the country, as the very ones who are least worthy to be obeyed. If these opposition members of society are to have their way now, they cannot find fault with those persons who spoke their minds freely in the past on that

great question which, as we have agreed, underlies all our present dissensions.

It is easy to understand the bitterness which is often shown towards reformers. They are never general favorites. They are apt to interfere with vested rights and time-hallowed interests. They often wear an unlovely, forbidding aspect. Their office corresponds to that of Nature's sanitary commission for the removal of material nuisances. It is not the butterfly, but the beetle, which she employs for this duty. It is not the bird of paradise and the nightingale, but the fowl of dark plumage and unmelodious voice, to which is intrusted the sacred duty of eliminating the substances that infect the air. And the force of obvious analogy teaches us not to expect all the qualities which please the general taste in those whose instincts lead them to attack the moral nuisances which poison the atmosphere of society. But whether they please us in all their aspects or not, is not the question. Like them or not, they must and will perform their office, and we cannot stop them. They may be unwise, violent, abusive, extravagant,

impracticable, but they are alive, at any rate, and it is their business to remove abuses as soon as they are dead, and often to help them to die. To quarrel with them because they are beetles, and not butterflies, is natural, but far from profitable. They grow none the worse for being trodden upon, like those tough weeds that love to nestle between the stones of court-yard pavements. If you strike at one of their heads with the bludgeon of the law, or of violence, it flies open like the seed-capsule of a snap-weed, and fills the whole region with seminal thoughts which will spring up in a crop just like the original martyr. They chased one of these enthusiasts, who attacked slavery, from St. Louis, and shot him at Alton in 1837 ; and on the 23d of June just passed, the Governor of Missouri, Chairman of the Committee on Emancipation, introduced to the Convention an Ordinance for the final extinction of slavery ! They hunted another through the streets of a great Northern city in 1835 ; and within a few weeks a regiment of colored soldiers, many of them bearing the marks of the slave-driver's whip on their backs,

marched out before a vast multitude tremulous with newly-stirred sympathies, through the streets of the same city, to fight our battles in the name of God and Liberty !

The same persons who abuse the reformers, and lay all our troubles at their door, are apt to be severe also on what they contemptuously emphasize as "sentiments" considered as motives of action. It is charitable to believe that they do not seriously contemplate or truly understand the meaning of the words they use, but rather play with them, as certain so-called "learned" quadrupeds play with the printed characters set before them. In all questions involving duty, we act from sentiments. Religion springs from them, the family order rests upon them, and in every community each act involving a relation between any two of its members implies the recognition or the denial of a sentiment. It is true that men often forget them or act against their bidding in the keen competition of business and politics. But God has not left the hard intellect of man to work out its devices without the constant presence of

beings with gentler and purer instincts. The breast of woman is the ever-rocking cradle of the pure and holy sentiments which will sooner or later steal their way into the mind of her sterner companion ; which will by and by emerge in the thoughts of the world's teachers, and at last thunder forth in the edicts of its law-givers and masters. Woman herself borrows half her tenderness from the sweet influences of maternity ; and childhood, that weeps at the story of suffering, that shudders at the picture of wrong, brings down its inspiration "from God, who is our home." To quarrel, then, with the class of minds that instinctively attack abuses, is not only profitless but senseless ; to sneer at the sentiments which are the springs of all just and virtuous actions, is merely a display of unthinking levity, or of want of the natural sensibilities.

With the hereditary character of the Southern people moving in one direction, and the awakened conscience of the North stirring in the other, the open conflict of opinion was inevitable, and equally inevitable its appearance in the field .

of national politics. For what is meant by self-government is, that a man shall make his convictions of what is right and expedient regulate the community so far as his fractional share of the government extends. If one has come to the conclusion, be it right or wrong, that any particular institution or statute is a violation of the sovereign law of God, it is to be expected that he will choose to be represented by those who share his belief, and who will in their wider sphere do all they legitimately can to get rid of the wrong in which they find themselves and their constituents involved. To prevent opinion from organizing itself under political forms may be very desirable, but it is not according to the theory or practice of self-government. And if at last organized opinions become arrayed in hostile shape against each other, we shall find that a just war is only the last inevitable link in a chain of closely connected impulses of which the original source is in Him who gave to tender and humble and uncorrupted souls the sense of right and wrong, which, after passing through various forms, has found its final expression in

the use of material force. Behind the bayonet is the lawgiver's statute, behind the statute the thinker's argument, behind the argument is the tender conscientiousness of woman, — woman, the wife, the mother, — who looks upon the face of God himself reflected in the unsullied soul of infancy. “Out of the mouths of babes and sucklings hast thou ordained strength, because of thine enemies.”

The simplest course for the malecontent is to find fault with the order of Nature and the Being who established it. Unless the law of moral progress were changed, or the Governor of the Universe were dethroned, it would be impossible to prevent a great uprising of the human conscience against a system, the legislation relating to which, in the words of so calm an observer as De Tocqueville, the Montesquieu of our laws, presents “such unparalleled atrocities as to show that the laws of humanity have been totally perverted.” Until the infinite selfishness of the powers that hate and fear the principles of free government swallowed up their convenient virtues, that system was hissed at by

all the old-world civilization. While in one section of our land the attempt has been going on to lift it out of the category of tolerated wrongs into the sphere of the world's beneficent agencies, it was to be expected that the protest of Northern manhood and womanhood would grow louder and stronger until the conflict of principles led to the conflict of forces. The moral uprising of the North came with the logical precision of destiny ; the rage of the "petty tyrants" was inevitable ; the plot to erect a slave empire followed with fated certainty ; and the only question left for us of the North was, whether we should suffer the cause of the Nation to go by default, or maintain its existence by the argument of cannon and musket, of bayonet and sabre.

The war in which we are engaged is for no meanly ambitious or unworthy purpose. It was primarily, and is to this moment, for the preservation of our national existence. The first direct movement towards it was a civil request on the part of certain Southern persons,

that the Nation would commit suicide, without making any unnecessary trouble about it. It was answered, with sentiments of the highest consideration, that there were constitutional and other objections to the Nation's laying violent hands upon itself. It was then requested, in a somewhat peremptory tone, that the Nation would be so obliging as to abstain from food until the natural consequences of that proceeding should manifest themselves. All this was done as between a single State and an isolated fortress ; but it was not South Carolina and Fort Sumter that were talking ; it was a vast conspiracy uttering its menace to a mighty nation ; the whole menagerie of treason was pacing its cages, ready to spring as soon as the doors were opened ; and all that the tigers of rebellion wanted to kindle their wild natures to frenzy, was the sight of flowing blood.

As if to show how coldly and calmly all this had been calculated beforehand by the conspirators, to make sure that no absence of malice aforethought should degrade the grand malignity of settled purpose into the trivial effervescence

of transient passion, the torch which was literally to launch the first missile, figuratively, to “fire the southern heart” and light the flame of civil war, was given into the trembling hand of an old white-headed man, the wretched incendiary whom history will handcuff in eternal infamy with the temple-burner of ancient Ephesus. The first gun that spat its iron insult at Fort Sumter, smote every loyal American full in the face. As when the foul witch used to torture her miniature image, the person it represented suffered all that she inflicted on his waxen counterpart, so every buffet that fell on the smoking fortress was felt by the sovereign nation of which that was the representative. Robbery could go no farther, for every loyal man of the North was despoiled in that single act as much as if a footpad had laid hands upon him to take from him his father’s staff and his mother’s Bible. Insult could go no farther, for over those battered walls waved the precious symbol of all we most value in the past and most hope for in the future, — the banner under which we became a nation, and which, next to the cross of

the Redeemer, is the dearest object of love and honor to all who toil or march or sail beneath its waving folds of glory.

Let us pause for a moment to consider what might have been the course of events if under the influence of fear, or of what some would name humanity, or of conscientious scruples to enter upon what a few please themselves and their rebel friends by calling a "wicked war"; if under any or all these influences we had taken the insult and the violence of South Carolina without accepting it as the first blow of a mortal combat, in which we must either die or give the last and finishing stroke.

By the same title which South Carolina asserted to Fort Sumter, Florida would have challenged as her own the Gibraltar of the Gulf, and Virginia the Ehrenbreitstein of the Chesapeake. Half our navy would have anchored under the guns of these suddenly alienated fortresses, with the flag of the rebellion flying at their peaks. "Old Ironsides" herself would have perhaps sailed out of Annapolis harbor to have a wooden Jefferson Davis shaped for her

figure-head at Norfolk, — for Andrew Jackson was a hater of secession, and his was no fitting effigy for the battle-ship of the red-handed conspiracy. With all the great fortresses, with half the ships and warlike material, in addition to all that was already stolen, in the traitors' hands, what chance would the loyal men in the Border States have stood against the rush of the desperate fanatics of the now triumphant faction? Where would Maryland, Kentucky, Missouri, Tennessee, — saved, or looking to be saved, even as it is, as by fire, — have been in the day of trial? Into whose hands would the Capital, the archives, the glory, the name, the very life of the nation as a nation, have fallen, endangered as all of them were, in spite of the volcanic outburst of the startled North which answered the roar of the first gun at Sumter? Worse than all, are we permitted to doubt that in the very bosom of the North itself there was a serpent, coiled but not sleeping, which only listened for the first word that made it safe to strike, to bury its fangs in the heart of Freedom, and blend its golden scales in close embrace

with the deadly reptile of the cotton-fields. Who would not wish that he were wrong in such a suspicion? yet who can forget the mysterious warnings that the allies of the rebels were to be found far north of the fatal boundary-line; and that it was in their own streets, against their own brothers, that the champions of liberty were to defend her sacred heritage?

Not to have fought, then, after the supreme indignity and outrage we had suffered, would have been to provoke every further wrong, and to furnish the means for its commission. It would have been to placard ourselves on the walls of the shattered fort, as the spiritless race the proud labor-thieves called us. It would have been to die as a nation of freemen, and to have given all we had left of our rights into the hands of alien tyrants in league with home-bred traitors.

Not to have fought would have been to be false to liberty everywhere, and to humanity. You have only to see who are our friends and who are our enemies in this struggle, to decide for what principles we are combating. We

know too well that the British aristocracy is not with us. We know what the West End of London wishes may be result of this controversy. The two halves of this Union are the two blades of the shears, threatening as those of Atropos herself, which will sooner or later cut into shreds the old charters of tyranny. How they would exult if they could but break the rivet that makes of the two blades one resistless weapon! The man who of all living Americans had the best opportunity of knowing how the fact stood, wrote these words in March, 1862: "That Great Britain did, in the most terrible moment of our domestic trial in struggling with a monstrous social evil she had earnestly professed to abhor, coldly and at once assume our inability to master it, and then become the only foreign nation steadily contributing in every indirect way possible to verify its pre-judgment, will probably be the verdict made up against her by posterity, on a calm comparison of the evidence."

So speaks the wise, tranquil statesman who represents the nation at the Court of St. James,

in the midst of embarrassments perhaps not less than those which vexed his illustrious grandfather, when he occupied the same position as the Envoy of the hated, new-born Republic.

“It cannot be denied,” — says another observer, placed on one of our national watch-towers in a foreign capital, — “it cannot be denied that the tendency of European public opinion, as delivered from high places, is more and more unfriendly to our cause”; — “but the people,” he adds, “everywhere sympathize with us, for they know that our cause is that of free institutions, — that our struggle is that of the people against an oligarchy.” These are the words of the Minister to Austria, whose generous sympathies with popular liberty no homage paid to his genius by the class whose admiring welcome is most seductive to scholars has ever spoiled; our fellow-citizen, the historian of a great Republic which infused a portion of its life into our own, — John Lothrop Motley.

It is a bitter commentary on the effects of European, and especially of British institutions, that such men should have to speak in such

terms of the manner in which our struggle has been regarded. We had, no doubt, very generally reckoned on the sympathy of England, at least, in a strife which, whatever pretexts were alleged as its cause, arrayed upon one side the supporters of an institution she was supposed to hate in earnest, and on the other its assailants. We had forgotten what her own poet, one of the truest and purest of her children, had said of his countrymen, in words which might well have been spoken by the British Premier to the American Ambassador asking for some evidence of kind feeling on the part of his Government :

“ Alas ! expect it not. We found no bait
To tempt us in thy country. Doing good,
Disinterested good, is not our trade.”

We know full well by this time what truth there is in these honest lines. We have found out, too, who our European enemies are, and why they are our enemies. Three bending statues bear up that gilded seat, which, in spite of the time-hallowed usurpations and consecrated wrongs so long associated with its history, is still venerated as the throne. One of these supports

is the pensioned church ; the second is the purchased army ; the third is the long-suffering people. Whenever the third caryatid comes to life and walks from beneath its burden, the capitals of Europe will be filled with the broken furniture of palaces. No wonder that our ministers find the privileged orders willing to see the ominous republic split into two antagonistic forces, each paralyzing the other, and standing in their mighty impotence a spectacle to courts and kings ; to be pointed at as helots who drank themselves blind and giddy out of that broken chalice which held the poisonous draught of liberty !

We know our enemies, and they are the enemies of popular rights. We know our friends, and they are the foremost champions of political and social progress. The eloquent voice and the busy pen of John Bright have both been ours, heartily, nobly, from the first ; the man of the people has been true to the cause of the people. That deep and generous thinker, who, more than any of her philosophical writers, represents the higher thought of England, John Stuart Mill,

has spoken for us in tones to which none but her sordid hucksters and her selfish land-graspers can refuse to listen. Count Gasparin and Laboulaye have sent us back the echo from liberal France; France, the country of ideas, whose earlier inspirations embodied themselves for us in the person of the youthful Lafayette. Italy, — would you know on which side the rights of the people and the hopes of the future are to be found in this momentous conflict, what surer test, what ampler demonstration can you ask than the eager sympathy of the Italian patriot whose name is the hope of the toiling many, and the dread of their oppressors, wherever it is spoken, the heroic Garibaldi?

But even when it is granted that the war was inevitable; when it is granted that it is for no base end, but first for the life of the nation, and more and more, as the quarrel deepens, for the welfare of mankind, for knowledge as against enforced ignorance, for justice as against oppression, for that kingdom of God on earth which neither the unrighteous man nor the extortioner can

hope to inherit, it may still be that the strife is hopeless, and must therefore be abandoned. Is it too much to say that whether the war is hopeless or not for the North depends chiefly on the answer to the question, whether the North has virtue and manhood enough to persevere in the contest so long as its resources hold out? But how much virtue and manhood it has can never be told until they are tried, and those who are first to doubt the prevailing existence of these qualities are not commonly themselves patterns of either. We have a right to trust that this people is virtuous and brave enough not to give up a just and necessary contest before its end is attained, or shown to be unattainable for want of material agencies. What was the end to be attained by accepting the gage of battle? It was to get the better of our assailants, and, having done so, to take exactly those steps which we should *then* consider necessary to our present and future safety. The more obstinate the resistance, the more completely must it be subdued. It may not even have been desirable, as Mr. Mill suggested long since,

that the victory over the rebellion should have been easily and speedily won, and so have failed to develop the true meaning of the conflict, to bring out the full strength of the revolted section, and to exhaust the means which would have served it for a still more desperate future effort. We cannot complain that our task has proved too easy. We give our Southern army, — for we must remember that it is our army, after all, only in a state of mutiny, — we give our Southern army credit for excellent spirit and perseverance in the face of many disadvantages. But we have a few plain facts which show the probable course of events ; the gradual but sure operation of the blockade ; the steady pushing back of the boundary of rebellion, in spite of resistance at many points, or even of such aggressive inroads as that which our armies are now meeting with their long lines of bayonets, — may God grant them victory ! — the progress of our arms down the Mississippi ; the relative value of gold and currency at Richmond and Washington. If the index-hands of force and credit continue to move in the ratio of the past

two years, where will the Confederacy be in twice or thrice that time?

Either all our statements of the relative numbers, power, and wealth of the two sections of the country signify nothing, or the resources of our opponents in men and means must be much nearer exhaustion than our own. The running sand of the hour-glass gives no warning, but runs as freely as ever when its last grains are about to fall. The merchant wears as bold a face the day before he is proclaimed a bankrupt, as he wore at the height of his fortunes. If Colonel Grierson found the Confederacy "a mere shell," so far as his equestrian excursion carried him, how can we say how soon the shell will collapse? It seems impossible that our own dissensions can produce anything more than local disturbances, like the Morristown revolt, which Washington put down at once by the aid of his faithful Massachusetts soldiers. But in a rebellious state dissension is ruin, and the violence of an explosion in a strict ratio to the pressure on every inch of the containing surface. Now we know the tremendous force which has

compelled the "unanimity" of the Southern people. There are men in the ranks of the Southern army, if we can trust the evidence which reaches us, who have been recruited with packs of blood-hounds, and drilled, as it were, with halters around their necks. We know what is the bitterness of those who have escaped this bloody harvest of the remorseless conspirators; and from that we can judge of the elements of destruction incorporated with many of the seemingly solid portions of the fabric of the rebellion. The facts are necessarily few, but we can reason from the laws of human nature as to what must be the feelings of the people of the South to their Northern neighbors. It is impossible that the love of the life which they have had in common, their glorious recollections, their blended histories, their sympathies as Americans, their mingled blood, their birthright as born under the same flag and protected by it the world over, their worship of the same God, under the same outward form, at least, and in the folds of the same ecclesiastical organizations, should all be forgotten, and leave nothing but hatred and eternal

alienation. Men do not change in this way, and we may be quite sure that the pretended unanimity of the South will some day or other prove to have been a part of the machinery of deception which the plotters have managed with such consummate skill. It is hardly to be doubted that in every part of the South, as in New Orleans, in Charleston, in Richmond, there are multitudes who wait for the day of deliverance, and for whom the coming of "our good friends, the enemies," as Beranger has it, will be like the advent of the angels to the prison-cells of Paul and Silas. But there is no need of depending on the aid of our white Southern friends, be they many or be they few; there is material power enough in the North, if there be the will to use it, to overrun and by degrees to recolonize the South, and it is far from impossible that some such process may be a part of the mechanism of its new birth, spreading from various centres of organization, on the plan which Nature follows when she would fill a half-finished tissue with bloodvessels, or change a temporary cartilage into bone.

Suppose, however, that the prospects of the war were, we need not say absolutely hopeless, — because that is the unfounded hypothesis of those whose wish is father to their thought, — but full of discouragement. Can we make a safe and honorable peace as the quarrel now stands? As honor comes before safety, let us look at that first. We have undertaken to resent a supreme insult, and have had to bear new insults and aggressions, even to the direct menace of our national capital. The blood which our best and bravest have shed will never sink into the ground until our wrongs are righted, or the power to right them is shown to be insufficient. If we stop now, all the loss of life has been butchery; if we carry out the intention with which we first resented the outrage, the earth drinks up the blood of our martyrs, and the rose of honor blooms forever where it was shed. To accept less than indemnity for the past, so far as the wretched kingdom of the conspirators can afford it, and security for the future, would discredit us in our own eyes and in the eyes of those who hate and long to be

able to despise us. But to reward the insults and the robberies we have suffered, by the surrender of our fortresses along the coast, in the national gulf, and on the banks of the national river, — and this and much more would surely be demanded of us, — would place the United Fraction of America on a level with the Peruvian guano-islands, whose ignoble but coveted soil is open to be plundered by all comers!

If we could make a peace without dishonor, could we make one that would be safe and lasting? We could have an armistice, no doubt, long enough for the flesh of our wounded men to heal and their broken bones to knit together. But could we expect a solid, substantial, enduring peace, in which the grass would have time to grow in the war-paths, and the bruised arms to rust, as the old G. R. cannon rusted in our State arsenal, sleeping with their tompions in their mouths, like so many sucking lambs? It is not the question whether the same set of soldiers would be again summoned to the field. Let us take it for granted that we have seen enough of the miseries of warfare to last us for a while,

and keep us contented with militia musters and sham-fights. The question is whether we could leave our children and our children's children with any secure trust that they would not have to go through the very trials we are enduring, probably on a more extended scale and in a more aggravated form.

It may be well to look at the prospects before us, if a peace is established on the basis of Southern independence, the only peace possible, unless we choose to add ourselves to the four millions who already call the Southern whites their masters. We know what the prevailing — we do not mean universal — spirit and temper of those people have been for generations, and what they are like to be after a long and bitter warfare. We know what their tone is to the people of the North ; if we do not, De Bow and Governor Hammond are schoolmasters who will teach us to our heart's content. We see how easily their social organization adapts itself to a state of warfare. They breed a superior order of men for leaders, an ignorant commonalty ready to follow them as the vassals of feudal

times followed their lords ; and a race of bondsmen, who, unless this war changes them from chattels to human beings, will continue to add vastly to their military strength in raising their food, in building their fortifications, in all the mechanical work of war, in fact, except, it may be, the handling of weapons. The institution proclaimed as the corner-stone of their government, does violence not merely to the precepts of religion, but to many of the best human instincts, yet their fanaticism for it is as sincere as any tribe of the desert ever manifested for the faith of the Prophet of Allah. They call themselves by the same name as the Christians of the North, yet there is as much difference between their Christianity and that of Wesley or of Channing, as between creeds that in past times have vowed mutual extermination. Still we must not call them barbarians because they cherish an institution hostile to civilization. Their highest culture stands out all the more brilliantly from the dark background of ignorance against which it is seen ; but it would be injustice to deny that they have always shone in

political science, or that their military capacity makes them most formidable antagonists, and that, however inferior they may be to their Northern fellow-countrymen in most branches of literature and science, the social elegances and personal graces lend their outward show to the best circles among their dominant class.

Whom have we then for our neighbors, in case of separation, — our neighbors along a splintered line of fracture extending for thousands of miles, — but the Saracens of the Nineteenth Century ; a fierce, intolerant, fanatical people, the males of which will be a perpetual standing army ; hating us worse than the Southern Hamilcar taught his swarthy boy to hate the Romans ; a people whose existence as a hostile nation on our frontier, is incompatible with our peaceful development ? Their wealth, the proceeds of enforced labor, multiplied by the breaking up of new cotton-fields, and in due time by the reopening of the slave-trade, will go to purchase arms, to construct fortresses, to fit out navies. The old Saracens, fanatics for a religion which professed to grow by conquest,

were a nation of predatory and migrating warriors. The Southern people, fanatics for a system essentially aggressive, conquering, wasting, which cannot remain stationary, but must grow by alternate appropriations of labor and of land, will come to resemble their earlier prototypes. Already, even, the insolence of their language to the people of the North is a close imitation of the style which those proud and arrogant Asiatics affected toward all the nations of Europe. What the "Christian dogs" were to the followers of Mahomet, the "accursed Yankees," the "Northern mudsills" are to the followers of the Southern Moloch. The accomplishments which we find in their choicer circles, were prefigured in the court of the chivalric Saladin, and the long train of Painim knights who rode forth to conquest under the Crescent. In all branches of culture, their heathen predecessors went far beyond them. The schools of mediæval learning were filled with Arabian teachers. The heavens declare the glory of the Oriental astronomers, as Algorab and Aldebaran repeat their Arabic names to the students of the starry

firmament. The sumptuous edifice erected by the Art of the nineteenth century, to hold the treasures of its Industry, could show nothing fairer than the court which copies the Moorish palace that crowns the summit of Granada. Yet this was the power which Charles the Hammer, striking for Christianity and civilization, had to break like a potter's vessel ; these were the people whom Spain had to utterly extirpate from the land where they had ruled for centuries !

Prepare, then, if you unseal the vase which holds this dangerous Afrit of Southern nationality, for a power on your borders that will be to you what the Saracens were to Europe before the son of Pepin shattered their armies, and flung the shards and shivers of their broken strength upon the refuse heap of extinguished barbarisms. Prepare for the possible fate of Christian Spain ; for a slave-market in Philadelphia ; for the Alhambra of a Southern caliph on the grounds consecrated by the domestic virtues of a long line of Presidents and their exemplary families. Remember the ages of border

warfare between England and Scotland, closed at last by the union of the two kingdoms. Recollect the hunting of the deer on the Cheviot hills, and all that it led to ; then think of the game which the dogs will follow open-mouthed across our Southern border, and all that is like to follow which the child may rue that is unborn ; think of these possibilities, or probabilities, if you will, and say whether you are ready to make a peace which will give you such a neighbor ; which may betray your civilization as that of half the Peninsula was given up to the Moors ; which may leave your fair border provinces to be crushed under the heel of a tyrant, as Holland was left to be trodden down by the Duke of Alva !

No ! no ! fellow-citizens ! We must fight in this quarrel until one side or the other is exhausted. Rather than suffer all that we have poured out of our blood, all that we have lavished of our substance, to have been expended in vain, and to bequeath an unsettled question, an unfinished conflict, an unavenged insult, an unrighted wrong, a stained escutcheon, a tarnished

shield, a dishonored flag, an unheroic memory to the descendants of those who have always claimed that their fathers were heroes ; rather than do all this, it were hardly an American exaggeration to say, better that the last man and the last dollar should be followed by the last woman and the last dime, the last child and the last copper !

There are those who profess to fear that our Government is becoming a mere irresponsible tyranny. If there are any who really believe that our present Chief Magistrate means to found a dynasty for himself and family, — that a *coup d'etat* is in preparation by which he is to become ABRAHAM, DEI GRATIA REX, — they cannot have duly pondered his letter of June 12th, in which he unbosoms himself with the simplicity of a rustic lover called upon by an anxious parent to explain his intentions. The force of his argument is not at all injured by the homeliness of his illustrations. The American people are not much afraid that their liberties will be usurped. An army of legislators is not

very likely to throw away its political privileges, and the idea of a despotism resting on an open ballot-box, is like that of Bunker Hill Monument built on the waves of Boston Harbor. We know pretty nearly how much of sincerity there is in the fears so clamorously expressed, and how far they are found in company with uncompromising hostility to the armed enemies of the nation. We have learned to put a true value on the services of the watch-dog who bays the moon, but does not bite the thief!

The men who are so busy holy-stoning the quarter-deck, while all hands are wanted to keep the ship afloat, can no doubt show spots upon it that would be very unsightly in fair weather. No thoroughly loyal man, however, need suffer from any arbitrary exercise of power, such as emergencies always give rise to. If any half-loyal man forgets his code of half-decencies and half-duties so far as to become obnoxious to the peremptory justice which takes the place of slower forms in all centres of conflagration, there is no sympathy for him among the soldiers who are risking their lives for us ; perhaps there

is even more satisfaction than when an avowed traitor is caught and punished. For of all men who are loathed by generous natures, such as fill the ranks of the armies of the Union, none are so thoroughly loathed as the men who contrive to keep just within the limits of the law, while their whole conduct provokes others to break it; whose patriotism consists in stopping an inch short of treason, and whose political morality has for its safeguard a just respect for the jailer and the hangman! The simple preventive against all possible injustice a citizen is like to suffer at the hands of a government which in its need and haste must of course commit many errors, is to take care to do nothing that will directly or indirectly help the enemy, or hinder the government in carrying on the war. When the clamor against usurpation and tyranny comes from citizens who can claim this negative merit, it may be listened to. When it comes from those who have done what they could to serve their country, it will receive the attention it deserves. Doubtless, there may prove to be wrongs which demand righting, but

the pretence of any plan for changing the essential principle of our self-governing system is a figment which its contrivers laugh over among themselves. Do the citizens of Harrisburg or of Philadelphia quarrel to-day about the strict legality of an executive act meant in good faith for their protection against the invader? We are all citizens of Harrisburg, all citizens of Philadelphia, in this hour of their peril, and with the enemy at work in our own harbors, we begin to understand the difference between a good and bad citizen; the man that helps and the man that hinders; the man who, while the pirate is in sight, complains that our anchor is dragging in his mud, and the man who violates the proprieties, like our brave Portland brothers, when they jumped on board the first steamer they could reach, cut her cable, and bore down on the corsair, with a habeas corpus act that lodged twenty buccaneers in Fort Preble before sunset!

We cannot, then, we cannot be circling inward to be swallowed up in the whirlpool of

national destruction. If our borders are invaded, it is only as the spur that is driven into the courser's flank to rouse his slumbering mettle. If our property is taxed, it is only to teach us that liberty is worth paying for as well as fighting for. We are pouring out the most generous blood of our youth and manhood ; alas ! this is always the price that must be paid for the redemption of a people. What have we to complain of, whose granaries are choking with plenty, whose streets are gay with shining robes and glittering equipages, whose industry is abundant enough to reap all its overflowing harvest, yet sure of employment and of its just reward, the soil of whose mighty valleys is an inexhaustible mine of fertility, whose mountains cover up such stores of heat and power, imprisoned in their coal measures, as would warm all the inhabitants and work all the machinery of our planet for unnumbered ages, whose rocks pour out rivers of oil, whose streams run yellow over beds of golden sand, — what have we to complain of ?

Have we degenerated from our English fathers,

so that we cannot do and bear for our national salvation what they have done and borne over and over again for their form of government? Could England, in her wars with Napoleon, bear an income-tax of ten per cent, and must we faint under the burden of an income-tax of three per cent.? Was she content to negotiate a loan at fifty-three for the hundred, and that paid in depreciated paper, and can we talk about financial ruin with our national stocks ranging from one to eight or nine above par, and the "five-twenty" war loan eagerly taken by our own people to the amount of nearly two hundred millions, without any check to the flow of the current pressing inwards against the doors of the Treasury? Except in those portions of the country which are the immediate seat of war, or liable to be made so, and which, having the greatest interest not to become the border states of hostile nations, can best afford to suffer now, the state of prosperity and comfort is such as to astonish those who visit us from other countries. What are war taxes to a nation which, as we are assured on good authority, has more men

worth a million now than it had worth ten thousand dollars at the close of the Revolution, — whose whole property is a hundred times, and whose commerce, inland and foreign, is five hundred times, what it was then ? But we need not study Mr. Stillé's pamphlet and "Thompson's Bank-Note Reporter," to show us what we know well enough, — that, so far from having occasion to tremble in fear of our impending ruin, we must rather blush for our material prosperity. For the multitudes who are unfortunate enough to be taxed for a million or more, of course we must feel deeply, at the same time suggesting that the more largely they report their incomes to the tax-gatherer, the more consolation they will find in the feeling that they have served their country. But — let us say it plainly — it will not hurt our people to be taught that there are other things to be cared for besides money-making and money-spending ; that the time has come when manhood must assert itself by brave deeds and noble thoughts ; when womanhood must assume its most sacred office, "to warn, to comfort," and, if need be,

“to command,” those whose services their country calls for. This Northern section of the land has become a great variety shop, of which the Atlantic cities are the long-extended counter. We have grown rich for what? To put gilt bands on coachmen’s hats? To sweep the foul sidewalks with the heaviest silks which the toiling artisans of France can send us? To look through plate-glass windows, and pity the brown soldiers, — or sneer at the black ones? to reduce the speed of trotting horses a second or two below its old minimum? to color meerschauts? to flaunt in laces, and sparkle in diamonds? to dredge our maidens’ hair with gold-dust? to float through life, the passive shuttlecocks of fashion, from the avenues to the beaches, and back again from the beaches to the avenues? Was it for this that the broad domain of the Western hemisphere was kept so long unvisited by civilization? — for this, that Time, the father of empires, unbound the virgin zone of this youngest of his daughters, and gave her, beautiful in the long veil of her forests, to the rude embrace of the adventurous Colonist?

All this is what we see around us, now, — now, while we are actually fighting this great battle, and supporting this great load of indebtedness. Wait till the diamonds go back to the Jews of Amsterdam ; till the plate-glass window bears the fatal announcement, *For Sale or to Let* ; till the voice of our Miriam is obeyed, as she sings,

Weave no more silks, ye Lyons looms ! ”

till the gold-dust is combed from the golden locks, and hoarded to buy bread ; till the fast-driving youth smokes his clay-pipe on the platform of the horse-car ; till the music-grinders cease because none will pay them ; till there are no peaches in the windows at twenty-four dollars a dozen, and no heaps of bananas and pine-apples selling at the street-corners ; till the ten-flounced dress has but three flounces, and it is felony to drink champagne ; — wait till these changes show themselves, the signs of deeper wants, the preludes of exhaustion and bankruptcy ; then let us talk of the Maelstrom ; — but till then, let us not be cowards with our purses, while brave men are emptying their hearts upon the earth for us ; let us not whine

over our imaginary ruin, while the reversed current of circling events is carrying us farther and farther, every hour, out of the influence of the great failing which was born of our wealth, and of the deadly sin which was our fatal inheritance !

Let us take a brief general glance at the wide field of discussion we are just leaving.

On Friday, the twelfth day of the month of April, in the year of our Lord eighteen hundred and sixty-one, at half past four of the clock in the afternoon, a cannon was aimed and fired by the authority of South Carolina at the wall of a fortress belonging to the United States. Its ball carried with it the hatreds, the rages of thirty years, shaped and cooled in the mould of malignant deliberation. Its wad was the charter of our national existence. Its muzzle was pointed at the stone which bore the symbol of our national sovereignty. As the echoes of its thunder died away, the telegraph clicked one word through every office of the land. That word was WAR !

War is a child that devours its nurses one after another, until it is claimed by its true parents. This war has eaten its way backward through all the technicalities of lawyers, learned in the infinitesimals of ordinances and statutes ; through all the casuistries of divines, experts in the differential calculus of conscience and duty ; until it stands revealed to all men as the natural and inevitable conflict of two incompatible forms of civilization, one or the other of which must dominate the central zone of the continent, and eventually claim the hemisphere for its development.

We have reached the region of those broad principles and large axioms which the wise Romans, the world's lawgivers, always recognized as above all special enactments. We have come to that solid substratum acknowledged by Grotius in his great Treatise : "Necessity itself, which reduces things to the mere right of Nature." The old rules which were enough for our guidance in quiet times, have become as meaningless "as moonlight on the dial of the day." We have followed precedents

as long as they could guide us ; now we must make precedents for the ages which are to succeed us.

If we are frightened from our object by the money we have spent, the current prices of United States stocks show that we value our nationality at only a small fraction of our wealth. If we feel that we are paying too dearly for it in the blood of our people, let us recall those grand words of Samuel Adams : —

“ I should advise persisting in our struggle for liberty, though it were revealed from heaven that nine hundred and ninety-nine were to perish, and only one of a thousand were to survive and retain his liberty ! ”

What we want now is a strong purpose ; the purpose of Luther, when he said, in repeating his Pater Noster, *fiat voluntas* MEA, — let *my* will be done ; though he considerately added, *quia* *Tua*, — because my will is Thine. We want the virile energy of determination which made the oath of Andrew Jackson sound so like the devotion of an ardent saint that the recording angel might have entered it unquestioned among the prayers of the faithful.

War is a grim business. Two years ago our women's fingers were busy making "Havelocks." It seemed to us then as if the Havelock made half the soldier; and now we smile to think of those days of inexperience and illusion. We know now what War means, and we cannot look its dull, dead ghastliness in the face unless we feel that there is some great and noble principle behind it. It makes little difference what we thought we were fighting for at first; we know what we are fighting for now, and what we are fighting against.

We are fighting for our existence. We say to those who would take back their several contributions to that undivided unity which we call the Nation; the bronze is cast; the statue is on its pedestal; you cannot reclaim the brass you flung into the crucible! There are rights, possessions, privileges, policies, relations, duties, acquired, retained, called into existence in virtue of the principle of absolute solidarity, — belonging to the United States as an organic whole, — which cannot be divided, which none of its constituent parties can claim as its own, which per-

ish out of its living frame when the wild forces of rebellion tear it limb from limb, and which it must defend, or confess self-government itself a failure.

We are fighting for that Constitution upon which our national existence reposes, now subjected by those who fired the scroll on which it was written from the cannon at Fort Sumter, to all those chances which the necessities of war entail upon every human arrangement, but still the venerable charter of our wide Republic.

We cannot fight for these objects without attacking the one mother cause of all the progeny of lesser antagonisms. Whether we know it or not, whether we mean it or not, we cannot help fighting against the system that has proved the source of all those miseries which the author of the Declaration of Independence trembled to anticipate. And this ought to make us willing to do and to suffer cheerfully. There were Holy Wars of old, in which it was glory enough to die, wars in which the one aim was to rescue the sepulchre of Christ from the hands of infidels. The sepulchre of Christ is not in Palestine!

He rose from that burial-place more than eighteen hundred years ago. He is crucified wherever his brothers are slain without cause ; he lies buried wherever man, made in his Maker's image, is entombed in ignorance lest he should learn the rights which his Divine Master gave him ! This is our Holy War, and we must fight it against that great General who will bring to it all the powers with which he fought against the Almighty before he was cast down from heaven. He has retained many a cunning advocate to recruit for him ; he has bribed many a smooth-tongued preacher to be his chaplain ; he has engaged the sordid by their avarice, the timid by their fears, the profligate by their love of adventure, and thousands of nobler natures by motives which we can all understand ; whose delusion we pity as we ought always to pity the error of those who know not what they do. Against him or for him we are all called upon to declare ourselves. There is no neutrality for any single true-born American. If any seek such a position, the stony finger of Dante's awful muse points them to their place in the antechamber of the Halls of Despair, —

— “with that ill band
Of angels mixed, who nor rebellious proved,
Nor yet were true to God, but for themselves
Were only.” —

— “Fame of them the world hath none
Nor suffers; mercy and justice scorn them both.
Speak not of them, but look, and pass them by.”

We must use all the means which God has put into our hands to serve him against the enemies of civilization. We must make and keep the great river free, whatever it costs us; it is strapping up the forefoot of the wild, untamable rebellion. We must not be too nice in the choice of our agents. *Non eget Mauri jaculis*, — no African bayonets wanted, — was well enough while we did not yet know the might of that desperate giant we had to deal with; but *Tros, Tyriusve*, — white or black, — is the safer motto now; for a good soldier, like a good horse, cannot be of a bad color. The iron-skins, as well as the iron-clads, have already done us noble service, and many a mother will clasp the returning boy, many a wife will welcome back the war-worn husband, whose smile would never again have gladdened his home, but that, cold

in the shallow trench of the battle-field, lies the half-buried form of the unchained bondsman whose dusky bosom sheaths the bullet which would else have claimed that darling as his country's sacrifice !

We shall have success if we truly *will* success, — not otherwise. It may be long in coming, — Heaven only knows through what trials and humblings we may have to pass before the full strength of the nation is duly arrayed and led to victory. We must be patient, as our fathers were patient ; even in our worst calamities, we must remember that defeat itself may be a gain where it costs our enemy more in relation to his strength than it costs ourselves. But if, in the inscrutable providence of the Almighty, this generation is disappointed in its lofty aspirations for the race, if we have not virtue enough to ennoble our whole people, and make it a nation of sovereigns, we shall at least hold in undying honor those who vindicated the insulted majesty of the Republic, and struck at her assailants so long as a drum-beat summoned them to the field of duty.

Citizens of Boston, sons and daughters of New England, men and women of the North, brothers and sisters in the bond of the American Union, you have among you the scarred and wasted soldiers who have shed their blood for your temporal salvation. They bore your nation's emblems bravely through the fire and smoke of the battle-field ; nay, their own bodies are starred with bullet-wounds and striped with sabre-cuts, as if to mark them as belonging to their country until their dust becomes a portion of the soil which they defended. In every Northern graveyard slumber the victims of this destroying struggle. Many whom you remember playing as children amidst the clover-blossoms of our Northern fields, sleep under nameless mounds with strange Southern wild-flowers blooming over them. By those wounds of living heroes, by those graves of fallen martyrs, by the hopes of your children, and the claims of your children's children yet unborn, in the name of outraged honor, in the interest of violated sovereignty, for the life of an imperilled nation, for the sake of men everywhere and of

our common humanity, for the glory of God and the advancement of his kingdom on earth, your country calls upon you to stand by her through good report and through evil report, in triumph and in defeat, until she emerges from the great war of Western civilization, Queen of the broad continent, Arbitress in the councils of earth's emancipated peoples ; until the flag that fell from the wall of Fort Sumter floats again inviolate, supreme, over all her ancient inheritance, every fortress, every capital, every ship, and this warring land is once more a United Nation !

THE END.



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